

Modernity Aspirations: The Struggle of Qatari Male Public High School Students  
to Become Successful Academically

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## ABSTRACT

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The small Gulf nation of Qatar, despite its vast oil and gas wealth, suffers from a lack of human capital, particularly with respect to deficits in academic outcomes. Despite extensive investment in education, Qataris, and in particular Qatari boys, are still underperforming relative to international standards and relative to its wealth. In this dissertation I explored political, economic, and sociological approaches to investigate factors contributing to the underperformance of male Qatari students. Specifically, I have examined how male Qatari high school students internalize social values and economic and political policies as “signals” that inform and are reflected in their attitudes towards education and learning. I have hypothesized that Qatari male students who perceive the economic entitlement signals, and who perceive *wasta* (social status) as a venue of success, and who lack civic engagement, will do worse academically. My research focused on Qatari males attending public high schools in Qatar, which are operated by the Ministry of Education, and examined their performance on national standardized tests. To investigate my research question, I conducted a quantitative study using an original survey instrument. The target population included a representative sample of Qatari high school students who were in grades 10, 11, and 12 in the public schools in Qatar. My analysis of the data found mixed results in which economic signals appear to be strongly associated with male academic performance. Furthermore, Qatari high school boys’ perceptions of the value of

*wasta* was correlated with their achievement on test scores. Surprisingly, Qatari high school boys' perceptions of civic engagement did not appear to associate with Qatari males' academic underperformance.

## DEDICATION

This dissertation and doctoral degree is dedicated to my family, without whose support all my efforts would not have born fruits. I dedicated my study to the people of Qatar. May Allah makes this study of blessing to all.

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BACKGROUND

As a small nation rich in natural resources, Qatar provides its citizens with benefits from access to housing, health care, and economic security. Despite Qatar's enormous wealth, its students continue to underperform with respect to national and international education indicators (Knowledge and Development Authority, 2009). Closer analysis of aggregate data suggests that national underperformance is only one part of the problem. Another part is the academic performance of Qatari males, which is not only objectively poor, but is consistently lower than that of Qatari females.

My study seeks to determine why Qatari boys continue to underperform academically by advancing the following hypotheses: (1) the perception of greater labor market opportunities among Male Qatari high school students will be correlated with lower exam scores; (2) high perceptions of social status (*wasta*) among male Qatari high school students will be correlated with lower exam scores; and (3) low participation in civic activities among male Qatari high school students will be correlated with lower student exam scores.

This study provides a brief *Background* for my analysis and describes the demographic, political, economic, and cultural characteristics of Qatar. I also describe the context in which Qatar undertook efforts to modernize its education system. In doing so, I explain the impacts of the reforms and the challenges the reforms faced with respect to their implementation and lack of sustainability. In the *literature review*, I examine the literature that provides a theoretical basis for my analysis. I begin with a discussion of the existence of a boys' academic crisis. I follow this section with a discussion of perception as an analytic tool. Subsequently, I examine the

research question through the lens of social contract and social capital theories. I end the chapter by explaining how the social contract and absence of social capital create challenges for human capital development in Qatar. It then describe the methods I used to conduct the quantitative analysis. I report my results and conclude with a discussion of those results.

## **The Nation of Qatar: A Snapshot**

### **Population**

Qatar is a small Arab nation in the Middle East, which, although similar to other Arab nations, has several unique characteristics. Qatar's most notable distinction is its population. Though it remains small, Qatar's population has increased rapidly in the span of a few decades and at a greater rate than any other Arab nation (Stasz et al., 2007). It is significant to note the composition of Qatar's population. The non-Qatari resident population, including expatriates and contract workers, constitute more than 80% of the total population of Qatar. This disproportion between citizens and noncitizens is particularly significant in terms of human capital, as the small size of the Qatari citizen population is insufficient to fill the demand for labor alone (Stasz et al., 2007).

### **Government**

Qatar is a sovereign state divided into municipalities and ruled by an emir (Gonzalez et al., 2008). Qatar has a participatory government with a fully enfranchised citizenry; that is, both male and female citizens may vote (Stasz et al., 2007). However, the citizenry's capacity to affect the government is limited, as the executive and legislative powers are reserved in the emir and Advisory Council (Gonzalez et al., 2008). In an effort to modernize, the government undertook measures intended to decentralize administrative policymaking across policy areas, encourage more innovation, and empower Qataris to have a voice. The impetus behind these changes was the adoption of a neoliberal philosophy that, in general, advocates for a reduction of governmental bureaucracy and the creation of a knowledge-based economy through the educational development of its citizens.

## **Market Economy**

**Economic incentives.** The aim of the Qatari National Vision of 2030 is to “transform Qatar into an advanced society capable of achieving sustainable development,” by 2030 (General Secretariat for Development Planning, 2008). As is the case with many Arab Gulf nations, natural resources comprise the majority of Qatar’s national wealth, accounting for more than 60% of its GDP, 85% of exports and 70% of government revenues (Gonzalez et al., 2008). In the last decade, Qatar has had remarkable economic growth relative to that of other nations, becoming one of the world’s fastest growing and highest per capita income countries, due to efforts that revitalized its economy in the 80s and 90s (Gonzales et al., 2008). Because Qatar’s economic growth is fairly recent in its history, the nation had not developed the education infrastructure necessary to prepare its population for participation in its expanding labor market economy. According to government of Qatar (GOQ) reports, most Qataris are not equipped to substitute for expatriates in private sector jobs as they lack the qualifications needed for such technical employment (Silatech, 2008). Additional characteristics account for the scarcity of Qataris in the private sector. Public sector government jobs, where the environment is more homogeneous in terms of both work and gender, are much easier for Qataris to secure, and those jobs are often perceived as more prestigious.

The preference among Qataris for jobs in the public sector is heavily influenced by the nature of the country’s distribution of wealth and the government policy of Qatarization. Qatar is considered a welfare or rentier state. A rentier state is one in which the national government receives rent from foreign sources for the use of their natural resources, and in turn distributes those rents to the citizens, by means of “grants, entitlements, contracts, licenses, or state employment” (Minnis as cited in Karl, 1997, p. 985). Qatari citizens are provided with free



health care, subsidized housing, free education, and retirement benefits. As a result, there is no need to seek private employment. Moreover, public sector jobs have low barriers to entry for citizens, and the responsibilities entailed in public sector jobs are not as demanding as those in private sector employment (Brewer, Augustine, Zellman, Ryan, Goldman, Sasz, & Constant, 2007).

In addition to those incentives created by the distribution of resources, Qatar instituted a labor market program, Qatarization, which sets percentage workforce targets for certain sectors of the labor market. These targets operate as a quota and mandate that a certain percentage of the particular private and public sector jobs must be held by Qatari nationals.

**Female participation.** As in many countries, gender considerations in Qatar influence labor market participation. Like many women in other countries, Qatari women have to integrate considerations of family planning and child-rearing into their labor market participation decisions. However, Qatari women must also incorporate religious and cultural considerations into those decisions. Consequently, many Qatari females prefer to work in single-sex environments and are half as likely as males to participate in mixed environment fields (SCFA, 2013). As a result, Qatari females are even more likely than are their male counterparts to choose public sector work where single-sexed, culturally homogenous options are more available (SCFA, 2013). However, among women, there has been a shift away from traditional occupations, such as teaching, toward a greater variety of fields, such as management, information technology, and banking. Females have also shown significant interest in pursuing fields such as engineering and law. On the other hand, Qatari males are more interested in careers related to oil and gas (Qazi, 2015; Felder and Vuollo, 2008).

**Recent changes.** In recent years, the plummet of oil prices and increased need for regional security created pressure for the government to modernize. Qatar sought to improve its investment in infrastructure and encourage greater participation in the private sector by both males and females. However, continued declines in oil prices has resulted in Qatar adopting austerity measures, cutting 40% of all budget allocations (Cafiero, 2016).

## **Culture**

Qatar is an Islamic nation. The Qatari constitution and Qatari laws reflect both “Islamic creed and Qatari traditions” (Adley, 2014, para. 6). Islam plays a significant role in shaping the relationship between the sexes. Traditionally in Qatar, men and women occupied different “spheres” of influence. Cultural norms favoring the separation of men and women remain evident in the strict establishment of single-sex schools in primary and secondary school, as well as in the tendency of women and men to seek employment in single-sexed settings. A fundamental characteristic of Qatari society was that boys were encouraged to socialize with other males outside of the home and participate in male-centered activities (Melikian, 1982). In contrast, families traditionally expected their girls to remain at home and socialize with other female relations, or to engage in domestic chores or academic study (Melikian, 1982).

Due to the rapid pace of development in Qatar, which included dramatic economic shifts, changes in higher education, and was influenced by globalization, Qatar has experienced corresponding social changes, particularly with respect to family dynamics. Women are increasingly represented in the workforce, even in the private sector. Accompanying that change, however, is a decrease in the rate of early marriage among Qatari men and women (GSDP, 2011). Among the reasons offered for the decline in early marriage are higher levels of

educational attainment for women, changes in marital expectations, and an increase in the selectivity of partners (GSDP, 2011).

Yet, despite global shifts toward modernity, the family remains the fundamental unit of Qatari culture (GSDP, 2011). Qatari families are typically larger than are those in Western cultures and they are characterized by extended kinship relationships and patriarchal governance.

Qataris share a close-knit culture unique from that of other Arab and non-Arab populations residing in Qatar. Due to language barriers and religious preferences, Qataris can integrate more easily with Arab than with non-Arab expatriates, particularly those from Western cultures (Diop et al., 2017). However, given the immense population of foreigners residing in Qatar, it is likely that these rapid changes in population will increasingly affect the traditions of Qatar (Qatar's National Human Development Report, 2015). In an effort to preserve culture and tradition in the face of modernization, the Qatari government has instituted some nation-wide changes, such as the introduction of a National Day and the incorporation of Qatari history into the standard education curriculum.

## **The State of Education in Qatar**

### **Education Reform and Modernization**

In the last decade, Qatar has experienced remarkable economic growth, becoming one of the world's fastest growing and highest per capita income countries, due to efforts that revitalized its economy in the 80s and 90s (Gonzales et al., 2008). Despite this, the population's education performance in primary and secondary schooling resembled that of a developing country, indicating that despite the wealth and innovation, this nation had deficits in human capital that needed to be addressed by its education system (Gonzales et al., 2008).

In its attempt to forge a pathway to modernity through an emphasis on education, Qatar focused on improving access to, enrollment in, and the quality of its education system. In this effort to build a “knowledge economy,” the Qatari government drastically reformed its education sector (Gonzalez et al., 2008). These reforms occurred at a time when Qatar was in the midst of a variety of other governmental and societal reforms, including changes to its health care system, higher education, and other government institutions. In 2002, Law 37 was issued, creating the Supreme Education Council (SEC) to “develop education which supports meeting the needs of the State in the area of outstanding human resources and qualifications in various sectors” (SEC Report, 2013a). The SEC consisted of three agencies: The Education Institute, the Evaluation Institute, and the Higher Education Institute.

Qatar sought to incorporate modern solutions to education and consequently the SEC worked closely with the RAND Corporation, a policy institute located in the United States. The collaborative efforts resulted in the formation of the Rand Qatar Policy Institute (RQPI) to create solutions for Qatar’s educational problems (Stasz, 2007). The education reforms were intended to modernize the curriculum by calling for increases in critical thinking, the abandonment of rote memorization, a switch from Arabic to English instruction in major subjects, the creation of a more autonomous independent school administration, and increases in accountability by setting standards for evaluating the performance of both schools and students (Brewer et al., 2007).

However, following the implementation of numerous reforms, the SEC faced a constant stream of policy churn. Policies, at times conflicting, were continuously introduced and subsequently withdrawn in response to dissatisfaction from administrators and parents (Paschyn, 2013). Some schools simply refused to implement reforms. In addition to frequent policy changes, significant changes at the bureaucratic level also influenced the efficacy of reforms. At

the initial phase of the initiatives, the Ministry of Education (MoE) retained control of traditional public schools while the SEC converted some public schools into the first generation of independent schools. Several years later, during the 2009–2010 school year, the MoE was absorbed into the SEC, and at that time all remaining public schools became the third generation of independent schools. However, in another major departure from the reforms, in March of 2015, the MoE regained control of the education system and the SEC was ultimately dismantled. In the following year, the designation of public schools reverted from “independent” to simply “public” schools (Pandit, 2016).

### **Reaction to and Results of Reform**

Qatari attitudes to the reform were split between support and adamant opposition. Pro-reformers believed that the education reform would lead the country to become a global competitor (SEC, 2013b) and that it would increase Qatari human capital and decrease reliance on foreign labor. Yet, many Qataris were against the reform. Critics argued that the reforms lacked understanding of local school systems (Al-Salih, 2008). Teachers and parents feared that in an effort to modernize, the country was losing its traditions in exchange for a foreign identity (Asmi, 2013). Still others questioned the efficacy of the reforms, arguing that the quality of education at the new independent schools was inferior to that of competing international and private schools (Paschyn, 2013).

One reason reforms may not have had the desired impact was that changes were implemented rapidly without sufficient time for proper and thorough implementation. Teachers often felt pressured to complete the curriculum in time for national exams (SEC, 2013b). Consequently, the spirit of the pedagogical reforms was lost as teachers returned to relying on textbooks, lectures, and rote memorization instead of the hands-on, critical thinking approaches

that the reforms were intended to encourage (Paschyn, 2013). Reforms could not bear the intended “fruit” because new standards required instruction of too much information, textbooks were not compatible with instruction, and teachers were faced with burdensome time constraints. Moreover, although not explicitly stated, it can be inferred from recent reform proposals that teachers, feeling pressured, had an incentive to cheat or misrepresent their students’ performance. In several documents, the SEC explicitly or implicitly addresses cheating, bribery, and the receipt of questionable gifts by administrators and teachers (SEC, 2013b).

Although the reforms resulted in the significant improvement in literacy rates and the relative success of Qatari education compared to other Arab nations, Qatari students still fared poorly in internally recognized standardized tests relative to international standards (OECD, 2010). In the 2009 results, five years after implementation of the reforms, Qatar was the fifth worst scoring country in the Program for International Student Assessment (PISA); moreover, Qatar placed in the bottom seven participating countries in every category of the 2011 The International Mathematics and Science Study (TIMSS; Mullis, et al., 2012).

### **Gender and Education**

The cultural and religious influence of sex differentiation in Qatar not only influences how parents raise their children and the different aspirations parents have for their children, but it also affects government policies about education and teachers. Sex segregation is common in most of Qatar’s public institutions and all of its public schools (Ridge, 2012). Boys are taught by males, and females taught by females. Although there are those who question the benefit of sex-segregated schools, the policy is not simply an edict passed by government officials, but is also a reflection of the will of the people. For example, many women who have the opportunity to

attend private coeducational schools in Qatar still choose to attend Qatar University, whose instruction remains separated by sex.

Although the reforms did not state any gender-related goals, they were more successful in improving the education outcomes of females relative to males. According to data from 2010, 98.3% of female youth ages 15 through 24 were enrolled in a school compared to 96.3% of males (Al-Merekhi et al., 2012). Also, literacy rates of young females increased significantly compared to that of males of the same age group, (Al-Merekhi et al., 2012). After the reforms, females were also more likely to continue their education in contrast with males who apparently abandoned schooling in exchange for lucrative employment opportunities (Al-Merekhi et al., 2012).

## LITERATURE REVIEW

### **The Crisis of Boys' Academic Underperformance**

The focus of this dissertation is on the academic underperformance of high school boys in Qatar. My emphasis begs the question of why, given the poor performance of all students in Qatar, do I focus on the performance of boys alone? I argue that, given the nature of the Qatari culture, its traditions, its patriarchal family structure, and the composition of its labor market, the poor academic performance and outcomes for boys is of critical importance.

### **Is There a Global Crisis of Boys' Academic Underperformance?**

Student academic underperformance is a topic that is researched extensively in education, both within the United States and abroad. Issues related to gender and education are often raised when examining factors that influence poor academic performance (Skelton et al., 2007). The issue of boys' underperformance as a crisis in education is widely debated internationally and the sheer number of books and articles discussing the topic is evidence of its importance. One basis for disagreement is that some scholars believe that the proponents of "disadvantaged boys" are simply reacting to feminism and the focus on increasing opportunities for women worldwide (Martino, 2009; Mead, 2006,). These critics refer to the problem as a "moral panic" (Coffey & Delamont, 2002; Mead, 2006; Martino, 2009) claiming that boys are the victims, and girls are therefore the perpetrators of boys' decline (Martino, 2009).

Another argument against the existence of a boy's crisis in education is that the assumption of a crisis incorrectly implies a "zero sum game analysis," where in order for girls to win, boys must lose (Martino, 2009). In fact, many argue that it is not that boys are failing, but



that girls are improving their academic level at a faster rate than are boys (Mead, 2006; Lynch et al., 2009).

A third argument challenging the existence of an academic crisis among boys is that there is a lack of rigorous empirical evidence to support the idea that boys were consistently underperforming academically. A U.S. study found that much of the literature on the presence of a boys' crisis was drawn from consultants, the news media, and conservative or religious policy analysts but not from academic sources (Martino, 2009). It has been argued that available scholarly research is methodologically flawed and not focused on the appropriate variables (Mead, 2006; Lynch et al., 2009). In particular, some researchers have argued that studies used to support the assertion that boys are suffering academically because of undue attention given to girls' performance have not properly accounted for other factors, such as race, ethnicity, and socioeconomic status, which may better account for boys' poor academic outcomes (Mead, 2006).

### **The Crisis is Real**

Despite the compelling arguments discussed above, national and international evidence of a crisis does exist. Even though it may seem like a recent interest, the idea that boys underachieve in education is not a new area for concern but one that has been explored for centuries (Lynch, 2009). In fact, in the United Kingdom, as early as the 1800s, there were studies examining the differences in academic performance between the sexes and finding a gap in favor of girls—"Girls come to learn, Boys have to be driven" (Lynch et al., 2009, p. 41). Some researchers have argued that the problem is that males are unlikely to be the focus of policy change or legislation unless one is analyzing their behavior toward females (Monkman & Hoffman, 2013). Studies on gender and equity focus heavily on gender equality, gender parity,

and the improvements women are making in the labor market (Lynch et al., 2009) but overlook the ways in which males are underrepresented in particular fields.

Evidence of male underachievement exists even if the picture is not well defined. Globally, girls have better attendance records and higher graduation rates, greater educational attainment, and are less likely to be in special education classes (Lynch et al., 2009). In an effort to argue that no crisis exists, some authors ignore their own data showing evidence of a problem. For example, in her attempt to argue that the situation for boys has not changed, Mead (2006) overlooks her own evidence showing that boys are more likely to have problems with violence and that older boys have been declining in academic performance and are facing deficits in education attainment and persistence.

### **The Existence of a Crisis in Qatar**

In Qatar, there is a growing unwillingness to acknowledge that males are underperforming relative to females. Ironically, this attitude reflects the antifeminist ideologies usually associated with proponents of a boys' crisis. Because one of the most visible leaders in the fight against male underperformance was a woman—the former president of Qatar University—the issue stirred strong feelings among Qataris that any evidence of a problem with boys is truly attributable to skewed female perception.

Al-Misnad, in her article, “The Dearth of Qatari Men in Higher Education: Reasons and Implications” (2012), pointed to the danger of excluding “boys” from analyses of labor markets. She found that “men are almost absent from post-secondary education . . . [which] has serious implications for the labor markets” (Al-Misnad, 2012, p. 6). She argued that by not considering the full participation of men and women in the labor market, Qatar will not be able to “fulfill the ambitious development plan” of 2030 Vision (Al-Misnad, 2012, p. 7). Her findings are

consistent with others who have written on this topic (Ridge, 2012). In her 2004 examination of the gender gap in the higher education system for Qatari students enrolled in Qatar University, she found that “by the age of 25, there were only 46 Qatari men with a university education for every 100 Qatari women with equal qualifications” (Al-Misnad, 2012, p. 8). In other words, Qatari boys are not only doing worse academically compared to the global trend but they are also doing poorly in comparison to Qatari females.

Further corroboration of the existence of a male academic crisis in education is the experience of the United Arab Emirates (UAE), another oil rich nation in the Middle East and North African region comparable to Qatar. Although the Middle East and North African regions are among the world’s highest with respect to a parity gap between the genders, in some of these nations, like that of Qatar and the UAE, the gap is in favor of females (UNDP, 2006). The UAE is also tackling the phenomena of male academic underperformance (Hamdan, 2012). According to the Knowledge and Human Development Authority in Dubai (KHDA), as much as 25% of Emirati boys drop out of high school (2011). Those who do manage to graduate do so at an advanced age (as old as 24) because of the need to repeat grades multiple times.

The education attainment differentials between men and women have implications for employment patterns in the labor force, where, on average, Qatari women have 3.4 more years of education than Qatari men (Al-Misnad, 2012). Although women have historically had much lower labor force participation rates than men, the trend has been for their participation to increase over time, almost doubling between 1986 and 2004. Furthermore, because women are better educated, it is easier for them to meet the educational requirements of highly-skilled, competitive jobs, so their presence in the private sector has also experienced rapid increases (Al-Misnad, 2012). But because Qatari women are less likely to participate in mixed-gender labor

settings, this gender imbalance in qualifications may create a pool of less qualified applicants for highly skilled technical jobs.

### **Why are Qatari Boys Failing? Theoretical Approaches**

In this dissertation, I will investigate the phenomenon of academic underperformance of Qatari boys in high school. I argue that students' perceptions of and attitudes toward academic achievement are affected by their internalization of social values, economic policies, and political policies. The internalization of these values or policies create "signals" toward which students orient their academic behavior. The term signals does not refer to discrete binary constructs, instead signals are a process by which policies and societal actions to which individuals are exposed unconsciously shape perception over time and influence their conscious behaviors. In particular, my research examines the relationship between a student's academic performance and their perceptions of the following: (a) the availability of economic opportunities afforded by Qatari citizenship; (b) the value of social status or *wasta*; (c) the value of civic engagement or participation in civic activities.

The theoretical underpinnings of my investigation incorporates approaches from several disciplines: political science, economics, sociology and psychology. Social contract theory is a political science theory that explains the legitimacy of the relationship between the ruler and the ruled. To apply the theory to the underperformance of Qatari boys, I first discuss the antecedents of the Qatari social contract and then examine the ways in which the current contract can create a disincentive for a motivated Qatari student.

My investigation also draws upon rational choice theory. Rational choice theory is primarily an economic theory that is premised on the idea that social behavior can be explained

by the analysis of individual decisions. These “rational” individuals chose among alternatives based upon their preferences and estimates of potential outcomes. An individual is assumed to have access to information about such choices, including the costs and benefits of making the choices and the knowledge about the likelihood of these choices occurring and their corresponding potential outcomes occurring. If applied to the case of Qatari boys, rational choice theory would predict that boys, using their “knowledge” of how employment is obtained, would choose to not invest in school but instead invest in developing strong social connections (*wasta*). According to the theory, this decision would be based on their understanding of which of the two options would provide greater returns.

However, although the investigation of male Qatari high school students examines the individual, an approach that seeks to explain the behavior of groups, such as sociology, may augment any explanation for why Qatari boys are collectively underperforming academically. A sociological framework explains the dynamics of relationships among groups: why groups form and how they sustain themselves. One approach to understanding group associations is to examine the presence or absence of social capital using a social capital theory analysis. By examining the nature of group relationships in Qatar— particularly with respect to whether those relationships are strong or weak, constitute bonding or bridging, and are characterized by reciprocity and mutual trust—I am able to identify the extent to which the maintenance of traditional kinship ties and exclusion of other groups may undermine support for academic success.

A psychological approach is also incorporated into this investigation through the examination of students’ beliefs, perceptions, and attitudes towards education. The discipline of psychology uses motivation as a construct to understand the relationships between thoughts,

behaviors, and performance. But the examination of motivation is in itself complex, because it requires an examination of many types of beliefs about one's abilities, internalization of external feedback, and the individual assignment of value to particular tasks. Attitudes, such as how one values education, or beliefs, such as what attributions one assigns to outcomes, can influence the desire to commit effort to or withdraw effort from an activity. With respect to Qatar, understanding the individual ideas and attitudes that Qatari high school boys have towards education may provide a clearer understanding of why they disengage from academic tasks. If Qatari boys' attributions of success are not related to their individual effort, but rather to external factors, it may explain their underperformance. In this way, the psychological approach may be compatible with economic considerations that focus on the individual.

In this study, I attempt to build a bridge between the actions of individuals and the institutions that constrain or promote their actions. It asks the question, to what extent does an investment in human capital on the part of the government prove unsuccessful because of the influence of political and social structures on students' beliefs and perceptions?

### **The Rentier Contract: Social Contract Analysis**

**Why use a social contract analysis?** To analyze the issue of academic underperformance, my research investigates various aspects of social, economic, and political policies that shape the perceptions of Qatari students. These perceptions are internalized in ways that influence students' valuation or devaluation of education, as evidenced by their scores on national exams. These social, economic, and political policies did not arise in a vacuum. Instead, they are part of the story of how the nation of Qatar came into being. These policies are essential elements forming the nature of the relationship between Qatari citizens and their government, specifically the nature of the "social contract."

The social contract in Qatar was originally unwritten, but in modern days, it was legitimized through the establishment of a written constitution. This contract, formed during the boom period of the oil industry, stipulated that the government would share income with its citizens by providing them with housing, free education, and other entitlements. However, in an effort to modernize, Qatar has undertaken several phases of large-scaled reform initiatives intended to shift the burden of providing some benefits of the social contract away from the government toward its citizens. These initiatives focus on increasing human capital by introducing the neoliberal ideal of competition into the labor market and the education sector in an effort to reduce citizens' reliance on government support and their increase self-reliance.

To date, Qatar's attempts to modify the "contract" have been resisted by the citizenry. Several reasons exist for this resistance: attachments to entitlements, adverse implications of "modernization" for traditional cultural norms, and fear of change and/or instability. Modifications create instability when expectations are altered particularly when such changes are poorly communicated and implemented and do not have popular support. Consequently, although the government has attempted to signal a need for change, there is little evidence that Qatari youth have recognized and responded to such signals. My research suggests that the most recent social contract has become entrenched to the point that it formed a habituated understanding of how life should be, so much so that any messages to the contrary are largely ignored.

**What is a social contract?** Philosophers who conceptualize the notion of a "social contract" commonly assert that it is important for humans to be bound by a social contract to protect self-interests. With some variation, each political philosopher answers the question, "Why do citizens choose to submit to political authority?" Thomas Hobbes (1651) attributed the

need to create a social contract as having arisen from the brutality of the state of nature.

Specifically, Hobbes argued that the justification for political obligation is based on rational self-interest that makes one willing to be subject to an authority in order to benefit from participation in a civil society.

Unlike Hobbes (1651), Locke (1821) was not preoccupied with nature as inherently a battle between self-interests. Instead, Locke argued that the creation of civil government is a result of private property rights and an individual's desire to protect that property that persuades one to abandon the State of Nature and pursue a collective society. On the other hand, Jean-Jacques Rousseau (1913) argued that the collective will of the social contract is created through an agreement with other free and equal parties. In this way the people must concede being free and conform themselves to the general will. He argued that the state lacked intrinsic power and consequently was subject to a lack of stability because its members could revolt at any time (Rousseau, 1913).

Turning to the more contemporary analyses provided by modern social contract theories, such as the one espoused by John Rawls (1971) in *The Theory of Justice*, emphasize how a social contract can be formed to protect the interests of many. In contrast to Rousseau's assumption that everyone is equal, Rawls acknowledged that inequities among citizens exist. Consequently, in order to create a system to which most would consent, he argued that one must make rules that most consider just. Rawls, like other political philosophers, believed that the protection of one's self-interest was the basis for forming agreements among citizens; however, he claimed that the cornerstone of arriving at a fair agreement was a "veil of ignorance." Under this veil, an individual is not aware of the characteristics with which he or she will be endowed. For example, one might be born into poverty, lack social status, or may be subjected to significant intellectual



or physical deficits. Therefore, if one attempts to create an exchange of benefits and obligations between the ruler and the ruled, one is less likely to create rules that are overly punitive or that limit benefits to only a few. Hence, Rawls characterized his theory as “justice as fairness”; since the conditions under which societal principles are discovered are basically fair, they are necessarily just.

Each of the above theories explain that it is intrinsic to human nature to be guided through an unspoken framework with others—a social contract—to secure personal safety, protect property, and provide equality. Though each conceptualization of social contract differs in some respect, they have in common the premise that individuals knowingly subject themselves to a common will or authority on the basis of their individual self-interests. The degree to which this Western philosophy sufficiently explains the basis for the formation of a social contract in Qatar or even in the wider Middle East region is arguable. Individuals both influence the composition of and are influenced by the exchanges within a given social contract. Underlying this research question is the assumption that the social contract in Qatar provides Qatari students with signals that drive their interests and shape their perceptions.

**The evolution of the social contract in Qatar and the Middle East.** Hassan Al-Sayed, a Qatari author, has described the social contract in the Gulf region as a “ruling bargain between sheikhs and citizens” (Al-Sayed, 2013). Although this definition comports with those offered by Western philosophers, differences exist between the origins of the social contract in the Middle East and that of the West because most Gulf nations have very limited democracies. In other words, the differences in the formation and the structure of the nation-state between Western nations and Gulf nations contributes to a difference in the obligations that exist between the rulers and the ruled.

In the West, the institution of parliaments and other democratic forms of legislative bodies were a “means to an end” (Chatham House, 2016). In other words citizens were given a say in law making in order to justify taxing them. So the end was an effort to create a formal means of accounting for how the citizens’ money (obtained through taxation) was spent. In order to legitimize their authority, parliaments and legislative bodies of nations in the West had to incorporate the views of the people because their wealth was obtained from those people. However, with respect to those Gulf states that instituted more modern institutions of government, the contract between the citizens and the government is an “end rather than a means,” as one Gulf national described it (Chatham House, 2016). This characterization is apt because the Gulf States are notable for the relative absence of political organizations because political parties are prohibited across the region. Because of these limitations, civil participation is not a necessary element for establishing the legitimacy of the authority. However, the state still has obligations to its citizens (Peterson, 2012). In exchange for limited political rights, loyalty, and acquiescence, the rulers of Gulf States offer their citizens the benefits and entitlements described above (Larbi, 2016). As one author opined, “the state assumes the mantle of responsibility for guiding and supervising society while the citizen eschews political [involvement]” (Peterson, 2012).

These state-assumed responsibilities implied in the social contract of Gulf States varied both over time and by nation depending on the conditions and the circumstance of the geopolitical world. (Al-Sayed, 2013)

In the period of early Islamic governance, four principles governed the appointment of rulers. The first was that the successor to authority possessed wisdom; the second was that a successor should not be a relative; the third was that a Calipha or a body of advisors were also to

be “people of wisdom or known to be wise” and; the fourth was that the Calipha had to win the approval and satisfaction of the majority. These rules are an indication that rulers, in the early social contract, were to some degree obligated to respond to the will of the people. As J. E. Peterson (2012) said in his description of the “fraying” of social contract in the Gulf region, “while autocratic and paternalistic,” the Gulf states have a “tradition of listening to their people” (p.24). As Rousseau (1913) predicted in his analysis, when the will of the people in the Gulf regions was no longer adhered to, it resulted in an instability that questioned the legitimacy of the ruling authority and led to conflicts such as the uprisings that comprised the “the Arab Spring.”

As mentioned earlier, although Qatar shares cultural, religious and political similarities with other Gulf nations, the social contract varies among Gulf nations. Saudi Arabia’s relationship between the citizens and rulers is strongly tied to its religion. Also despite its efforts to provide a unified national identity, Saudi Arabia, unlike other Gulf States, is hampered by its regional diversity. The distribution of wealth among Saudi Arabian regions has not been uniform and has resulted in some regions having less loyalty toward the ruling family (Chatham House, 2016).

Kuwait falls on the other extreme of the social contract continuum. Kuwait is assumed to have a more egalitarian relationship between the rulers and the ruled. Relative to other Gulf nations, Kuwait is open to civic associations and unions and has a constitution that provides for a parliament where Kuwaitis feel as if they have a say in the development of the social contract (Chatham House, 2016). Kuwait also allows for the formation of political parties, called “groups” or “societies,” which are both familial and ideological in nature (Peterson, 2012, p.16). In this way, Kuwait is very different from the rest of the GCC (Peterson, 2012).

Qatar's social contract is at neither extreme. In its distribution of wealth to all citizens, Qatar is more egalitarian than Saudi Arabia, but it does not have the appearance of democratic institutions that are present in Kuwait.

**Attempts to transform the social contract in Gulf nations.** A number of reasons created the need for modification of the social contracts of Gulf nation states, but the most visible among them was the recognition that these states needed greater economic independence and self-reliance. This recognition among Gulf nations became particularly obvious when the “post-independence development model ran out of steam in the 1980s” (Larbi, 2016, p. 29). Lower gas prices and other conditions resulted in a period of fiscal tightening (Larbi, 2016) for many Gulf nations and gave rise to the first attempts to modify the contract through the introduction of neoliberal calls for privatization. These calls were an attempt to steer these countries away from a contract defined by heavy reliance on the government and toward a new contract focused on decentralization of government through private investment and the emergence of private institutions. The underlying assumption driving this change was that this decentralization would result in a social “vibrancy” and avoid political hegemony (Larbi, 2016).

Although there may be general acceptance that economic changes require a shift in the established relationships between the government and the people in the Gulf region, there is clear evidence that efforts made to transition to this “Thatcher” type model of taxation and privatization were not a smooth road. The first wave of reforms in the 1990s intended to increase “private investment, restore fiscal stability and revive growth and job creation” (Larbi, 2016, p. 32) did not produce the degree of growth that was expected. As a result, some countries in the region suffered from political unrest.

The case of Bahrain provides an example of extreme fraying, if not complete dissolution of the social contract in that the relationship between the ruler and the ruled was characterized by political suppression, resistance to dialogue, and overall instability (Peterson, 2012). One example of an attempt to pull back on the social contract in Bahrain was the threat of termination of meat subsidies. The change was viewed as undesirable and an “unprecedented intervention” in governance (Chatham House, 2016). People voiced their opposition, leading to a brief reconsideration on the part of the government. But ultimately, the reform was implemented at a later date (Citizens for Bahrain, 2015). Oman, a poor country relative to others in the GCC, has suffered from unequal access to wealth. “Its elites have displayed an all too familiar pattern of using their status and positions to amass wealth” (Peterson, 2012, p. 21), with less of Oman’s resources being distributed among the people. In Oman, “[t]he chorus of dissent that erupted in the Spring of 2011 (the Arab Spring) and continued through much of the summer seemed to focus on restoration of the social contract, demanding reform but not revolution” (Peterson, 2012, p. 21). Eventually, the Omani government’s efforts proved more successful, if only because the limited scope of its reform tried to avoid destabilization. The Omani Council chose to limit its implementation of a new tax region to expatriates rather than extending it to nationals, essentially leaving the social contract unchanged.

Such reactions of political unrest are consistent with Rousseau’s contention that a state’s legitimacy is not intrinsic but remains constantly subject to revolt. On the other hand, there is also some evidence that the conflict and political instability may have created a willingness on the part of citizens of some Gulf nations to accept some later attempts at reform, whether in the form of taxation or reductions in state-provided resources (Chatham House, 2016). The unrest had a paradoxical effect of having some citizens of GCC countries pull inward to secure national

identities and traditions (Peterson, 2012). Such an effect was evidenced in a recent survey of Qataris. After the unrest in 2011, a survey of Qataris showed an almost 20% reduction of Qataris claiming to be “interested” or “very interested” in politics (Peterson, 2012, p.25). Also, the survey reported an almost 10% reduction in the proportion of Qataris who believed that it was very important to live in a democratic country (Gengler, 2011). In effect, citizens of Arabian Gulf nations appeared to be more willing to sacrifice their participation in government, or rather, increase their loyalty, than to face significant disruption to the existing social contract (Peterson, 2012).

**Recommendation for contemporary revisions and why they fall short.** Contributing authors Rother and Devarajan, in “Rewriting the Arab Social Contract” emphasized the need for governments in the Gulf to enable a participatory policy-making process (Larbi, 2016). They argued that such a process is needed to successfully modify the social contract to promote the modernization of GCC economies. But what does this mean for countries that do not already have these political, social, and economic institutions in place? It is true that trust should be restored and that political buy-in is necessary to drive tough reforms needed for the rewriting of the social contract (Larbi, 2016). However, what is lacking in the policy recommendations is the mechanism by which each country will create “political stability and inclusion and . . . [a] cohesive, just, and prosperous societies” (Larbi, 2016, p.78). Indeed, one intuitive blogger posed the following question in response to the typical recommendation to adopt a Western neoliberal market solution: “How can we discuss privatization in a nation where the government is the major shareholder of every corporation, even the ‘private ones’?” (Amico, 2016).

Some GCC countries, in an effort to appease their citizens and offer reform rather than revolution, have suggested institutional reforms to provide greater political access. “Oman

gradually extended universal suffrage to its body, the UAE has broadened its narrow electoral base cautiously, and Qatar has promised National Assembly (majlis ashura), but has not implemented it yet” (Peterson, 2012, p. 9). But these solutions are often aspirational in character and are either poorly implemented or simply fail to take into account the reality that significant modification of the existing social contract will require large changes in the expectations and understanding of citizens’ obligations.

Collectively, the failed efforts of Gulf nations, including Qatar, to restructure the social contract without the presence of societal structures to support these changes illustrate the difficulty of creating a modern, more self-reliant citizen within the confines of a rentier state mentality. How are students interacting with the political, economic, and social forces that reinforce entitlement and reliance on the government? In the next section, I transition to a discussion of belief and perception formation to explore how students may interact with these forces to make decisions about whether to exert academic effort or invest in alternative paths to ensure their success. A better understanding of student perceptions may shed light on which aspects of the current social contract need modification in order for students’ perceptions, and ultimately student behavior, to change.

### **The Value of Investigating Individual Perceptions**

In this section, I move away from the macro discussion of the social contract to examine the individual because the individual—the Qatari male high school student—is the subject of my research inquiry. One of the assumptions underlying my research is that the performance of male Qatari high school students reflects their investment in education based on their perception of certain societal signals. This assumption rests on another assumption, that is, that male Qatari

high school students are making decisions based on their beliefs and perceptions. Such an approach to analyzing individual behavior is most commonly associated with a theoretical approach grounded in economics—rational choice theory (Chai, 1999). This theory includes the presupposition that actors hold a set of logically consistent beliefs about the outcome of actions, have ranked preferences regarding those outcomes, and will optimize their actions given those preferences (Chai, 1999).

In the education field, researchers have applied rational choice analysis extensively to the analysis of student academic outcomes. Chai (1999) argued that the use of expectancy-value theory in education research relies on the same key assumption of expected utility that forms the basis of rational choice analysis. Expectancy-value theory focuses on the relationship between an individual's valuation of particular activities and predictions about their behavioral outcomes. (Eccles & Wigfield, 2002). For example, Wigfield and Eccles (2002) used the expectancy-value model to explain achievement motivation of students. Wigfield and Eccles proposed that external beliefs can influence a student's interest in and value placed on performing a particular task. Students can value a task because they place importance on how well they perform (attainment value) or value a task because of its usefulness in attaining future goals (utility value; Schunk et al., 2014). These values can influence choice, persistence, and achievement. In this theory, choices are mutually exclusive and are “assumed to have costs associated with them precisely because one choice often eliminates other options” (Eccles and Wigfield, 2002, p118). Ultimately, the expectancy-value theory as applied to academic achievement, would maintain that the relative value that a student places on various options and their estimation of the probability of success would be the “key determinant” of their decision to engage in one activity over another (Eccles and Wigfield, 2002, p118).



The application of expectancy-value analysis to this research is that male Qatari high school students, given their beliefs about the outcomes of the value of education, would then choose to invest in academic achievement according to those preferences. If I observe that male Qatari students are not investing in developing their human capital, as evidenced by an unwillingness to pursue higher levels of education or by their academic underperformance, we could infer, assuming their choices were rational, that those activities were not preferred. But what rational choice theory fails to take into account is that decision making is not simple nor is it linear, and there are things that shape beliefs outside of the individual.

Researchers have promoted other theories that constrain the application of rational choice. In his critique of rational choice, arguing for a more comprehensive approach to analyzing behavior, Chai (1999) noted one limitation of rational choice theory is that the nature of preferences and beliefs is exogenous to the model and therefore requires that assumptions are made about those beliefs. He clearly argued that traditional rational choice theory does not properly account for a “variety of human motivations” and “overlooks how ideology, culture, identity and related factors have a significant effect on action” (Chai, 1999, p. 96). Pintrich et al, (Eccles & Wigfield, 2002) have argued that “modern expectancy value theory could be “cold” and unduly focused on the cognitive process (p.127). This oversight is important with respect to this research because I argue that Qatari students are acting on the perception of those factors that are outside the traditional rational choice model. Even Wigfield and Eccles (2002), though operating within the scheme of rational choice, incorporated into their achievement model other influences on academic behavior, including students’ perceptions of external influences, such as “their perceptions of socializers’ attitudes and expectations . . . important socializers’ beliefs,

values, and behaviors, and various contextual and cultural influences” (Wigfield & Eccles, 2002, p. 92-93).

Perception belongs to a subset of constructs used to identify and describe the “content of mental states that are thought to drive a person’s actions” (Richardson, 1996, p. 103). Within these constructs are also beliefs and attitudes. These constructs are studied across many disciplines, including anthropology, social psychology, philosophy, and political science, but all converge on the idea that these constructs present psychologically held understandings of the world that are proposed to be true and upon which an individual bases his or her actions (Richardson, 1996).

The inclusion of external influences on beliefs is consistent with seminal research in the field of belief formation. Bourdieu (2000) explained that beliefs that may appear to be innate and natural are actually shaped by the social context of the individual:

I developed the concept of “habitus” to incorporate the objective structures of society and the subjective role of agents within it. The habitus is a set of dispositions, reflexes and forms of behavior people acquire through acting in society. It reflects the different positions people have in society, for example, whether they are brought up in a middle-class environment or in a working-class suburb. It is part of how society produces itself. But there is also change. Conflict is built into society. People can find that their expectations and ways of living are suddenly out of step with the new social position they find themselves in. . . . Then the question of social agency and political intervention becomes very important. (p. 19)

Essentially, Bourdieu argued that the inherent qualities of a person that constitute his or her orientation toward the world (i.e., his or her mind and character) are created unconsciously through the person's interaction with society. This unconscious orientation goes beyond the formation of beliefs and is then reflected in an individual's behavior (Swartz, 1998). As Siisiäinen (2000) explained, habitus is a process in which humans subjectively internalize their objective surroundings to form their practices. Accordingly, "habitus forms a durable generative principle that guides the actor in his/her new choices" (Siisiäinen, 2000, p. 16). Ultimately, the principles and unconscious ideas serve to reinforce existing societal norms as individuals become a product of the very society that shaped them (Swartz, 1998). I argue that Qatari students subjectively internalize their objective reality—societal norms of Qatarization and entitlement in which Qataris are paid more, provided preferences in the job market, and receive greater access to resources. These internalized perceptions form their subjective beliefs about the relative value society places on education and consequently shape their valuation of education. Although Qatari might appear to deliberately act on these forces, yet they might unconsciously reinforcing societal, political and economic forces.

Coleman (1988) furthermore argued that beliefs not only are centered in the psychology of the individual but also have sociological effects. He adopted both intellectual streams that accepts the principle of rational or purposive action and attempts to show how that principle in conjunction with particular social contexts, can account not only for the actions of individuals in particular contexts but also for the development of social organization. (Coleman, 1988, p. S96).

In this research, I attempt to do the same by looking at the perception of individual male Qatari high school students in an attempt to explain the phenomenon of the academic underperformance of Qatari male students within a social context of a rentier state.

### **Mediating Between Macro and Micro Analysis: Understanding the Relationship between Qatari Society and the Qatari Student Using the Lens of Social Capital**

**The relevance of social capital.** I am conducting my research against the larger backdrop of Qatar's efforts to modernize, become self-reliant, and increase human capital. Preminent authors in the fields of political science and sociology have argued that an investment in social capital is necessary to achieve this economic and social growth (Coleman, 1988; Fukuyama, 2000; Putnam, 2000). Specifically, Fukuyama (2000) asserted that "social capital is important to the efficient functioning of modern economies and is the sine qua non of stable liberal democracy" (p. 1). In an effort to modernize while retaining a sense of tradition, an investment in developing social capital could be an effective long-term means of solidifying Qatari identity while diffusing power among residents and citizens for greater participation and greater voice (Fukuyama, 1995). One benefit of using social capital as a theoretical tool is its ability to "account for actions of individuals" (Coleman, 1988, p. S96) while accounting for the actions of a group. As Coleman (1988) argued, social capital's explanatory power rests in its ability to analyze "micro to macro transitions" (p. S101). In this research, I use social capital theory as a tool for understanding the dynamic of relationships and societal interactions among Qatari students that can either facilitate or hamper their academic success. In particular, I explore how students' perceptions of the importance of social networks and their solidarity within groups might affect their attitudes toward the value of education.

**What is social capital?** The concept of social capital has been examined by a number of recognized researchers in the disciplines of political science and sociology. Pierre Bourdieu (1986), one of the first thinkers to delve into this concept, defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (p. 51). In Bourdieu’s view, these resources are accessed through social relationships, and it is the amount and quality of such resources that form the basis of social capital (Portes, 1998).

Although James Coleman (1998) never referred to Bourdieu, his analysis of social capital was functionally consonant with Bourdieu’s description. He described social capital as a set of social structures that could be used by various actors to achieve a particular end. Like others, he distinguished social capital from other forms of capital, such as human capital, that are intrinsic to the actor: in other words, social capital is defined by the relations “between and among actors,” not within the actors themselves (Coleman 1988, p. S98).

Unlike Bourdieu’s notions, Coleman’s (1988) derivation of social capital stemmed from his efforts to explain social action by incorporating economic approaches of rational choice. Moving beyond the analysis of individual preferences and the maximization of utility, he used social capital to explain how people are shaped by social norms, rules, and obligations and how these actors value aspects of social constructs as resources to achieve their interests (Coleman, 1988).

Coleman (1988) identified three forms of social capital. The first, coined in his treatise on “Social Capital in the Creation of Human Capital”, is marked by “obligations, expectations and trustworthiness” (p. S102). This form of social capital depends on the level of trust among actors in a social environment that obligations will be repaid, and on the extent to which obligations are

actually repaid—in other words, the extent to which one could ‘call in a favor’ (Coleman, 1988). A second form of social capital in Coleman’s work, distinct from obligations and favors, is an information network in which actors rely on social groups to keep abreast of information relevant to that network. Coleman’s third form of social capital is characterized by norms embodied by a social group or community. These norms facilitate and prevent actions through rewards and sanctions (Coleman, 1988).

Although Coleman made distinctions among forms of social capital, there is significant disagreement about what constitutes social capital. Fukuyama (2000) argued that what most researchers define as social capital is in fact manifestations of it rather than the “capital” itself. Additionally, Alejandro Portes (1998) argued that Coleman conflated the term by incorporating the components, benefits, and associations that mediate social capital into its definition.

Fukuyama (2000) asserted that social capital arises out of “instantiated norms” derived from cultural experience. To provide some clarity, Alejandro Portes (1998) refined the term, making a distinction between the sources of social capital and its results by identifying four sources of social capital: (a) value introjection; (b) reciprocity exchanges; (c) forms of bounded solidarity; and (d) enforceable trust.

Despite the differences among authors, Coleman’s first and third forms appear to be the definitions most agreed upon in various analyses of social capital. Whether one appeals to Bourdieu, Portes, or Fukuyama, the concept of social capital is intrinsically linked to obligations, reciprocity, trust, and norms.

**Obligations and reciprocity.** Portes’ first, second, and third sources of social capital (i.e., values, reciprocity, and solidarity) are analogous to Coleman’s identification of “obligations, expectation and trustworthiness” in that these are benefits to the individual derived

from group cohesion. Portes (2000) used the term “bounded solidarity” to refer to those relationships formed by one’s identification with a “group, sect, or community” (p. 8). Membership in these groups allows individuals to access resources with the expectation that such favors or obligations will be returned, in one form or another, without having to establish a fixed time frame. In this way, networks can be used to further individual mobility through a system of reciprocity, similar to the “credit-slip” relationships Coleman referenced in his analysis of the first form of social capital (Coleman, 1998; Portes, 2000).

In the context of Qatar and the larger Gulf region, the Arabic term *wasta* refers to the use of social connections to obtain benefits that would otherwise be unattainable or extremely difficult to obtain (Mohamed & Hamdy, 2008). Its corollary in the Western context would be the use of social status and social connections—that is, “who you know” rather than “what you know”—to gain access to resources.

*Wasta* shares several positive elements identified in the literature as characteristic of social capital and its benefits. In particular, embedded in the very notion of *wasta* is the first form of social capital as articulated by Coleman (1988): obligations, reciprocity, and trust. In a manner similar to that discussed by Portes (1998) and Coleman (1988), the term *wasta* denotes an implicit obligation for members of a social group to provide others in the group with “favorable treatment” (Lackner, 2013). In accordance with Western analyses of social capital obligations, *wasta* places no obligation for any party to provide immediate compensation, directly or in-kind, for any favor received. Aside from its benefit structure, *wasta* fits another characteristic of social capital articulated by Coleman and Portes. Analogous to Portes’s (1998) bounded solidarity, *wasta* is also a means of providing closure to group identity, by “constitut[ing] societal cohesion and provid[ing] solidarity in a national level” (Ramady, 2016).

Ramady (2016) argued that *wasta* is a manifestation of solidarity that extends not only within families but also to the larger society of tribes and extra-familial friendships. In the Gulf region, the use of *wasta* denotes an accepted form of social capital that binds certain classes of people together to achieve their ends, such as having greater and quicker access to government services than those without (Kropf & Ramady, 2015).

**Norms and value introjection.** Fukuyama (2000), Coleman (1988), and Portes (1998) each emphasized how norms must mediate behaviors within groups in order to establish the trust necessary to obtain the benefits of social capital. Portes (1998) argued that group solidarity uses norms as an informal way to discipline members and promote compliance as well as to reinforce behaviors that promote trust. However, Fukuyama (2000) clearly distinguished between norms that contribute to social capital and those that do not. According to Fukuyama (2000), social-capital-producing norms must lead to cooperation within or between groups. He argued that all group interactions involve some transmission of norms, even those existing solely within the domain of families and close-knit friendships; but to the extent that they operate only within a small sphere, such norms will fail to generate social capital. Similarly, in the Moral Basis of a Backward Society (1958), Paul Banfield attributed the social isolation and lack of collective action of southern Italian communities to the overwhelming presence of strong familial attachments. Fukuyama's (2000) narrowing of social capital to exclude norms within familial relationships is distinct from Coleman's broader use of the term, but is consistent with Bourdieu's use (1986). Bourdieu (1986) also distinguished familial norms from the broader ones that constituted social capital. He perceived norms arising out of familial engagements as creating cultural capital rather than social capital. In his view, and that of Fukuyama, social capital is gained through norms created by outside networks (Bourdieu, 1986; Fukuyama, 1995).



In the Gulf region and in the wider Middle East, *wasta* serves as a mechanism to reinforce norms among familial and broader non-familial relationships.<sup>1</sup> For example, one way in which norms are reinforced is through the ability of group members to enhance or destroy a member's reputation. It is costly to refuse to use one's *wasta* to redistribute resources. An individual who fails to appropriately act on his or her obligations may suffer reputation losses both inside and outside of the community (Lackner, 2016). Such norms associated from *wasta* may not be sufficiently extensive or broad to meet Fukuyama's definition; however, the norms of *wasta* are instrumental to the facilitation of social cooperation and to the transfer of goods, services, and benefits among members of groups.

**Trust.** The element of trust and its importance to group relationships is another theme that arises across the various analyses of social capital in the literature. Fukuyama (1995) and Putnam (1993) noted that trust was a precondition for the development of social capital, as well as a consequence of its existence. According to Fukuyama (2000) and Coleman (1988), trust is necessary for group members to believe that exchanges will indeed be reciprocal and that obligations will be fulfilled according to the established norms.

Social capital arises from trust because it permits and fosters cooperation of individuals within and between groups (Fukuyama, 1995). Banfield (1958) went to great lengths to describe the societal deficits that arise in the absence of trust: an inability to effectively solve problems outside one's family and to work toward common goals. Fukuyama (1995) reinforced this assertion by arguing that a lack of trust results in the need for government intervention in the civic domain to resolve problems that would otherwise have been solved through private, voluntary cooperation.

Regardless of its origins or how one chooses to define its characteristics, there is a general agreement that social capital captures the ability to gain benefits by means of social networks and structures or membership in associations (Portes, 1998). Social, political, and economic changes can change the ways in which social capital develops. Furthermore, authors agree that social capital cannot be quickly created. Building trust takes time, as does the reinforcement of habits and norms among members of a society or group (Fukuyama, 1995). Even under the most ideal circumstances, it may still require several generations to create the necessary bonds to establish the mutual trust required for social capital to flourish (Banfield, 1958).

**Social capital and its collective benefits.** Whereas the benefits of social capital can be described in terms of the mobility gains afforded to individuals as a result of membership in a group, the benefits of social capital are also collective. According to Coleman (1988), public benefits are derived from individual actions that have a broader effect on other members of a group or community, thereby allowing groups to accomplish greater gains. Moreover, the “generalized reciprocity” attributable to the interconnected horizontal associations found in societies with a high degree of social capital promotes organic societal growth, both economic and non-economic (Fukuyama, 1995). The collective benefit of social capital is relevant to this study in three ways: (a) its contribution to economic growth and entrepreneurship; (b) its contribution to modernization and civic capacity; and (c) its contribution to education as a collective good.

**Economic benefits.** From an economic perspective, the generalized reciprocity evidenced in social capital requires a shared system of principles that foster transactions between strangers to allow for the type of exchanges necessary for entrepreneurial interactions (Fukuyama, 1995;

Portes, 1998). Fukuyama (1995, 2000) argued that such exchanges led to the rise of modern corporations that are more efficient than state-sponsored alternatives, which are forced to intervene in the absence of social capital. A high degree of social capital in a society also encourages organizational flexibility because, as discussed above, the presence of trust reduces the need for inflexible bureaucratic and hierarchical structures.

In the context of promoting organizational strength, when trusts exist among all layers of an organization, a leader can delegate tasks to subordinates without fear and with the expectation that such tasks will be undertaken. In this manner, such trust promotes diffusion of power among lower members of an organization, giving them a personal investment in their contribution to the larger group (Fukuyama, 1995). Without the social capital of such trust, economic and organizational stagnation will occur because the possibility of defection or exit increases and it becomes difficult to effect change as members believe they are without “voice” or power to create change (Putnam, 2000). International documents provide evidence of the importance of social capital in the international discourse on economic development. “Firms can benefit from norms of co-operative trust embodied in various types of intra-firm or inter-firm networks because these facilitate co-ordination and lower transaction costs arising from negotiation and enforcement, imperfect information and layers of unnecessary bureaucracy” (Organisation for Economic Co-operation and Development, 2001, p. 57).

In Qatar, *wasta* is a tool for hiring and can reduce the transaction costs that arise because of asymmetric information (Ramady, 2016). Using *wasta*, employers have an efficient means of gaining information about prospective applicants without using costly advertising searches, hiring search firms, or performing multiple interviews.

***Modernization and civic engagement.*** From a political perspective, researchers have discussed how social capital, or its precursors of trusts and norms, assist in the modernization and democratization of a nation, especially with respect to the creation of civil society. The literature is unclear whether the presence of social capital is a necessary precondition for the creation of a sustainable modern state or whether social capital flourishes as a result of a sustainable modern state. However, there is significant agreement in the literature that successful modern nations are often characterized by the promotion of associations and communities where citizens interact in dense social networks to enhance equality, community solidarity, trust, and tolerance among people (Coleman, 1998; Fukuyama, 2000; Portes, 1998; Putnam, 2000).

Civic engagement and its relationship to social capital matters because both are associated with political modernity as well as economic prosperity. Societies with high civic capacity tend to be more economically prosperous (Almond & Verba, 1963 ; Banfield, 1958 ; Putnam, Leonardi & Nanetti, 1993). Strong political institutions are a critical element of sustaining such economic stability (Fukuyama, 1995). Democracies, the predominant form of the modern state in the West (Held, 1996), are characterized by ideals of freedom, equity, and representation (Gutman, 1999). In a democracy, civic participation is a means by which citizenry can hold their representatives accountable. It ensures that citizens are not merely “passive subjects” ruled by a government” but participate in the acceptance or rejection of the laws that bind them (Gutman, 1999, p. xii). Such participation is predicated on trust; as trust contributes to organizational growth, it is associated with both the development and the stability of political institutions. Societies with higher levels of trust and the ability to create and sustain formal and informal associations across groups have higher degrees of civic capacity (Almond & Verba, 1963; Fukuyama, 2000; Putnam, 1993). To encourage and sustain participation in associations,

members must trust that the group will serve their political interests and that collaboration within and between associations will result in effective solutions to problems. In the same way, citizens must trust that the government will be responsive to their needs in order to sustain citizen participation in government.

Some authors point to the familial or tribal nature of societies in the Gulf region as well as to the lack of Western forms of voluntary associations and political organizations as evidence of a lack of social capital in the region. In such regions, civil society organizations, such as professional associations, unofficial media, and “autonomous” nongovernmental entities tend to be weak and are often co-opted by governments (Abed & Davoodi, 2003). This is not to say that reliance on informal norms and the absence of associations are necessarily bad. Fukuyama (2000) argued that informal norms will remain a part of modern economics as economies become more complex because these norms serve to reduce transaction costs even in the presence of strong institutions. However, the literature supports the need for nations to have collaborative associations to foster economic growth and civic engagement. This need for collaboration is acute especially among Gulf nations, where the economy relies on large groups of non-citizens who work and live alongside citizens but remain outside the dominant culture.

Because Qatar is a constitutional monarchy in which there are no elections for national leadership and no political parties, civic participation in government is limited to participation in municipal activities (Bashir & Gray, 2015). Outside of direct participation in government, the forum of the *majlis* in Gulf States, including Qatar, can fulfil the function of voluntary associations. This concept of voluntary participation in *majlis* is distinct from another common use of the word to describe official governmental bodies in the region. Instead, I use the term *majlis* to refer to a place “where the men and their guests gather for social purposes to discuss

family affairs or for the resolution of interpersonal conflicts” (Melikian, 1982, p. 39). The *majlis* is an important venue of child-rearing in Qatar as it is the forum for the development of young boys into men. However, although Qatari boys’ associations may extend beyond their family members through participation in the *majlis*, their social interactions are generally limited to like-minded individuals with whom they are most comfortable (Al-Emadi et al., 2013). In this way, gender-segregated forms of collectivist associations, such as the *majlis*, may not generate the type of horizontal associations that are necessary for building civic capacity (Jamal, 2007), which may explain why Qatar has a negligible appetite for political change (Bashir & Gray, 2015).

In considering the value of associations and the detriment created by the lack thereof, arguably one of Putnam’s greatest contributions to the study of social capital is his characterization of social relationships. He identified two distinct ways in which group effects of social capital are manifested: bridging and bonding (Putnam, 1993). Bonding relationships are characterized by homogeneous group cohesion; in other words, they are the connections formed within and among groups of individuals sharing similar characteristics (Diop et al., 2017; Putnam, 1993). These types of relationships are typically found in traditional societies (Diop et al., 2017). In contrast, bridging relationships are characterized by the extension of networks across diverse social spheres (Putnam, 1993). Bridging relationships are created by the formation of social ties across heterogeneous social, religious, or economic groups.

The concepts of bridging and bonding are related to the analysis of the effects of strong and weak social ties (Granovetter, 1973). In his analysis of the operation of social networks, Granovetter (1973) argued that traditional groups have an absence of weak ties. Fukuyama (2000) defines weak ties as “heterodox individuals at the periphery of the society’s various social

networks who are able to move between groups and thereby become bearers of new ideas and information” (p.5). He found that “bridging weak ties” is a source of information and access to knowledge outside of one’s own circles. The concept of weak ties essentially describes those desirable relationships found in horizontal societies to which Putnam and Fukuyama refer, and which abound within voluntary associations. No matter the term used, authors examining social networks or social capital generally agree that the weaker ties of horizontal societies allow for greater collaboration and therefore contribute to the egalitarian principles that support a strong participatory government (Fukuyama, 1995; Granovetter, 1973). Moreover, the lack of willingness to form those bridging associations, which yield abstract benefits such as increased exposure to diverse perspectives, may prevent the development of the essential element of trust element described above (Beugelsdijk & Smulders, 2003).

Using Putnam’s analysis, Qatar could be characterized as having strong bonding social ties (Diop et al., 2017). These ties are formed in the common experiences of Qataris in a fairly homogeneous society with shared cultures, traditions, values, norms, and religion. Even with respect to expatriates, Qatari society reflects bonding relationships that exist between Qataris and non-Qataris who are members of the larger Arab society (Diop et al., 2016). Yet, differences in social status, living conditions, and cultural norms create a gap between Qataris and Western expatriates that makes it difficult to form bridging ties (Diop et al., 2016). Qataris’ attitudes toward these expatriates are influenced by government policies and their perceptions of economic and political conditions, which may increase or decrease their openness toward guest workers. For example, when, in 2011, the salaries of Qatari nationals increased by 60% and global attention to Qatar’s treatment of guest workers increased, Qataris seemed to be more welcoming of guest workers (Beugelsdijk & Smulders, 2003). The lack of strong political

institutions and voluntary associations and the absence of bridging relationships pose a threat to Qatar's ability to increase its social capital.

***Benefits to education.*** In the context of this research on the academic outcomes of Qatari high school boys, one of the most significant contributions of social capital to the public good is its ability to mediate academic gains through family, social networks, and education institutions (Coleman, 1998). Education plays a significant role in the creation of civil society. In my investigation of how the perceptions of individual students are associated with their academic outcomes, a social capital analysis provides a useful context for examining both the private and the public nature of education. David Labaree (1997) outlined how educational goals have shifted in the United States over time, and identified three of those goals as (a) promoting democracy and equality, (b) promoting social efficiency, and (c) promoting individual social mobility. The first two goals concern the public benefit of education. First, education plays a role in preparing the formation of citizens and in conveying civic values. Second, education promotes social efficiency by contributing to the economic outcomes of society as a whole. When citizens are educated in a manner that ensures their participation in the labor market, society will benefit from a healthier economy. This benefit is distinct from an individual's self-interested attainment of wealth or status associated with his or her investment in education. "Social efficiency, then, is the perspective of the taxpayer and the employer, from which education is seen as a public good designed to prepare workers to fill structurally necessary market roles" (Labaree, 1997, p. 42). Considering these goals in the context of Coleman (1988) and Portes's (1998) elements of social capital—value introjection, norm enforcement, and group cohesion— it is easy to see how formal education plays a role in creating or reinforcing social capital. Schools are a means of transmitting and reinforcing ideas of what is fair and just, what it means to be a contributing



member of society, and what it means to identify with a group, whether ethnic or socio-economic.

Education is also related to social capital in terms of the way in which schools can reflect the stability or instability of a community. Coleman (1988) investigated the effects of intergenerational closure on academic outcomes. Intergenerational closure is the cohesion that is derived from generations of families belonging to a community within which norms have been established over a long period, and in which such norms mediate the relationships between one generation and the next. Controlling for socio-economic characteristics and religion, Coleman showed that students who attended Catholic or other religious high schools were less likely to dropout than were students attending public or independent private schools. According to his analysis, in a community with high intergenerational closure the ties between generations (in this case, parents and children) are stronger because there is greater overlap between the social groups of both generations (Coleman, 1988). This greater overlap allows for a wider establishment of sanctions to enforce norms, including norms outside the scope of schooling or education, by group members outside of the immediate family. It also allows for the creation of trust needed to support the formation of collaborative associations.

Coleman (1988) argued that it was perhaps the shared religious or communities ties of these families that accounted for the enhanced academic outcomes of these students, but this analysis also demonstrates the complexity of the social capital analysis. In contrast to the benefits of closure described by Coleman, the shared religious and community ties in Qatar have led to strong national bonds and very weak bridging. Because the social capital that has developed is largely characterized by bonding, there is little interest in modernization and little interest, if not active disinterest, in education. As a result, although the government has built

universities, colleges and schools, Qataris have avoided learning modern subjects such as the sciences, technology, engineering, and mathematics. Government efforts to stimulate learning have not yielded positive academic effects. A 2015 survey of Qatari children ages 10–12 found that although they had strong identification with Qatari culture, they had very limited knowledge of other cultures (Childhood Cultural Center, 2015). Again, these findings are indicative of how strong bonding ties and the absence social capital derived from bridging can be detrimental.

**Social capital and its negative externalities.** It is clear that presence of social capital in a society provides individuals and the society at large with benefits. However, much of the research has acknowledged that social capital—or its defining attributes—can generate negative externalities results as well. With the prominent use of social capital as an inherently desirable concept in political and sociological literature, a review of the research on social capital reveals that there are negatives to social capital as well—what Fukuyama (2000) referred to as “too much of a good thing” (p. 8). Portes (1998) highlighted four negative aspects of social capital, which he identified as the problems of (a) community closure, (b) excess claims, (c) restrictions on personal freedom, and (d) downward leveling norms of group solidarity.

**Community closure.** Community closure is the extent to which communities exclude outside groups or members from participation in their social networks. This closure can be evidenced in ethnic groups but also in professional associations such as merchant guilds and trade unions (Fukuyama, 2000; Portes, 1998). Familial societies are highly coordinated collectives in which the collective actions of group members benefit themselves to the detriment of outsiders (Portes, 1998). This effect is in contrast to the positive benefits of closure that can contribute to the economic success of members of such groups. Portes’s (1998) description of community closure is evidenced in Qatar society in the separation between citizens and

expatriates. Such separation serves to protect the financial stability and well-being of the citizenry and also serves to prevent the penetration of foreign norms and value systems into the dominant Qatari culture.

The basis of Qatari cohesion is not only tribal or familial, but also includes traditions and the shared religion of Islam that constitute the core of Qatari national identity (Diop et al., 2017). Problems arise when the strength of the identity cohesion prevents cooperation among groups, particularly those groups of non-Western expatriates with whom they must regularly interact. Ultimately, such closure increases tensions between those groups (Diop et al., 2017).

***Excess claims.*** Portes (1998) explained that excess claims arise when kinsmen seek greater benefits and greater access to resources to such an extent that it harms business initiatives and induces the problem of free ridership. Not only is this problematic in economic circumstances, but it can also dampen the civic benefit of social capital. This negative externality is created when groups engage in rent-seeking behavior (Fukuyama, 2000, p. 8). Such free ridership occurs when a member's benefit is solely derived from being able to access the resources of a few without making any contributions in return. In the context of political action, when lobbyists successfully lobby for resources in a way that does not create social benefits for the larger community, such claims can have an overall negative effect. In Qatar, this exacerbation of Coleman's credit slips in which kinsmen seek disproportionate benefits can be seen in the way in which *wasta* works in the employment sector. Although *wasta* could produce the group benefit of lowering transaction costs, as described earlier, it also leads to inefficiencies and may benefit some to the exclusion of many others. For instance, Paul Salem (2010) argued that reliance on *wasta* is incompatible with the principles of meritocracy and accountability, both of which are necessary for effective policymaking and governance.

The prominence of the concept of ‘meritocracy,’— the ideology that one’s attainment of position or status should solely depend on demonstrated talent and ability— has created the perception that the use of social networks is unfair. With respect to *wasta*, this perception has grown over time with the emergence of formal associations that have taken the place of informal ones (Ramady, 2016). Accordingly, *wasta* has lost legitimacy as a result of modernization because it appears to circumvent more formal bureaucratic procedures. Some political scientists perceive *wasta* as a form of corruption that is responsible for the Arab world’s “brain drain” (Mohamed & Hamdy, 2008) because it promotes social net worth over that of merit.

This potential negative aspect of social networking is particularly troubling because *wasta* plays a critical role in education, as well as in hiring and promotion decisions in the Arab labor market, including Qatar. *Wasta* could secure admissions to universities, as well as favorable treatment by universities once a student has matriculated. Tanner and Wilson (2016) provided examples of how *wasta* is used to circumvent the bureaucratic process in some Emirati universities: providing special treatment for female students with fathers in high-ranking government positions, in the awarding of university contracts, in the appointment of faculty, and in the promotion of administrative managers. At times, an applicant with strong *wasta* and poor qualifications will be favored over an applicant with strong qualifications and poor *wasta* (Mohamed & Hamdy, 2008). Consequently, the beneficiary of the *wasta* is ultimately viewed as less competent. This argument is similar to those posed in the United States regarding applicants who are given preference, whether due to social status or affirmative action policies.

***Restriction on freedom.*** The third negative aspect of social capital, according to Portes (1998), is its use of norms to impose restrictions on personal freedom. Portes saw this as a natural consequence of the normative effects of strong group ties. By virtue of sanctions imposed

by a close-knit society, one's autonomy to do as one chooses is constrained. To the extent that one values individuality over collectivism, such constraint on one's freedom may lead to separation from one's group and reduce intergenerational benefits of social capital. Even though Ramady (2016) argued that people may adhere to norms to lower the transaction costs of interaction, he acknowledged that such an adherence to norms can also create a barrier to innovation. For example, the reinforcement of norms and group cohesion may also reinforce preexisting social stratification.

***Downward leveling of norms.*** Portes' (1998) fourth form of negative social capital, the downward leveling of group solidarity, is created when what binds a group is its opposition to a dominant, more "mainstream" group. As explained by Portes, this may occur when a group has encountered long-term discrimination, such as that faced by ethnic minorities in the United States. In the face of a shared experience, such a group may develop an antagonistic response to both the dominant group as well as toward members who escape. A similar analysis was used by Ogbu (1987) in his characterization of African Americans as "acting white." African Americans who seem to "escape" the confines of their group are labeled negatively by members who remain. Such solidarity may result in the perpetuation of the negative effects of discrimination.

Qatari students understand and recognize the existence and the value of *wasta* in their society. The recognition of *wasta* and its power and relevance in gaining desired employment, when internalized, sends a signal to Qatari boys that academic effort is not the primary means of achievement. The idea that *wasta* matters in Qatar is evidenced by data obtained in a recent report of Qatari youth. The report indicated that even though Qatari youth believed that taking part in regular job training increased one's chances of obtaining employment, a majority of the same youth also believed that "knowing people in high positions is critical to getting a good job"

(Sliatch Report, Slide 76). It is possible that Qatari males have less incentive to exert effort on academic tasks, and this demotivation is evidenced by their poor performance in coursework and test scores. This view is predicated on a perception of *wasta* as an undesirable phenomenon. However, a competing and equally valid view is that *wasta* is proving to be beneficial in its use as an informal network by youth as an engine of employment in a highly competitive labor market (Mohammed & Hamdy, 2008), both for paid jobs in the private sector as well as for the introduction of qualified students to training programs.

**The theoretical limitations of social capital.** Although it has had a strong place in sociological research and that of other disciplines, social capital's use as an analytical tool for understanding societal interactions has faced some criticism. There are three major criticisms of social capital: (1) social capital has no clear definition in the literature, (2) the negative aspects of social capital are often overlooked or underemphasized, and (3) there is no agreed upon method of measurement (Fukuyama, 2000; Portes, 1998).

As a term, "social capital" is over inclusive. Portes' (1998) primary argument in his discussion of its origins is that the use of the term has expanded to such an extent that it has started to lose its heuristic meaning. In particular, he attributes a diffusion of the term to Coleman (1988), whose definition included all three of the following: mechanisms that generated social capital, the consequences of social capital, and the institutions that provided the context for the sources of social capital and its effects. Coleman's conflation of the term is in stark contrast to his predecessor, Bourdieu (1986), who provided a clear distinction between what gave rise to social capital and its effects. A lack of separation between cause and effects results in a logical flaw of circular reasoning, thereby creating a problem for any attempt to accurately measure the presence or degree of social capital in a society. However, I do not have to confront

this particular difficulty in my investigation as I am only using social capital to provide a context for explaining the academic underperformance of Qatari boys.

Another strong criticism of social capital analysis is that it is predominantly presented as only beneficial, whether to individuals, communities, or to larger societies. As discussed in the previous section, social capital is, in fact, a “double-edged sword” in that it can be a source of social suppression, exclusion, and other negative externalities (Coleman, 1988; Fukuyama, 2000). Portes (1998) acknowledged sociologists’ preference for theories that explain collective behaviors over those that explain the self-interested behavior of individuals: “Indeed it is our sociological bias to see good things emerging out of sociability; bad things are more commonly associated with the behavior of homo economicus” (p.15). In addition to the overemphasis on the good of social capital, there is also the normative tendency to hail the Western manifestations of social capital as positive while failing to acknowledge that social capital could appear in different forms in countries with vastly different institutions, cultures, and traditions from those in the West (Fukuyama, 2000; Ramady, 2016). Ramady (2016) noted the tendency in descriptions of social action to coin attributes of social capital positively when those attributes were consistent with Western ideals, but when associated with less individualistic societies, the same attributes were treated as “traditional and backward” ( Kropf & Newbury-Smith 2016 p. 12).

One of the biggest difficulties in the analysis of social capital is the attempt to empirically quantify its presence in a particular society (Fukuyama, 2000; Portes, 1998). Many of the values are subjective and cannot easily be measured (see, for example, Coleman’s inability to measure intergenerational characteristics). Putnam’s (2000) analysis was predicated on a measurement of the number of groups or associations within a society. Although he was careful to distinguish between participatory and nonparticipatory forms commonly found in more hierarchical groups,

his analysis still excluded many contemporary forms of association, such as those found in online communities (Fukuyama, 1995, p. 10). Fukuyama (1995) addressed the need for and the difficulty of measuring social capital, not simply the existence of associations but also measuring the quality of interactions among groups to account for the degree of cohesiveness.

However, in spite of these drawbacks, social capital analysis remains useful as a tool to help explain individuals' interactions in a society. These interactions can ultimately shape individuals' perceptions and self-interests. Understanding the influence of these societal signals may help to explain what drives individuals or, in my case, students to be academically successful. Expansion of networks might lead to greater access to education and employment and the ability to attain higher social status. More importantly, social capital analysis adds to the understanding of how to sustain human capital in that it sheds light on the role of relationships, trust, and norms in the search for ideas. A newer understanding of human capital and the well-being of nations encompasses the idea of a "learning economy." In this concept of a knowledge or learning economy, human capital is like social capital in that it moves beyond the focus on the individual to appreciate the broader public benefit engendered by the existence of networks and collaboration between firms and individuals to share and apply knowledge.

### **Human Capital and the Creation of a Modern Qatari**

The old definition of human capital was tied to the quality of labor, that is, the education attainment level and training in the workforce. This narrow definition simply measured the acquisition of cognitive skills and knowledge. However, with the advancement of technology and increased reliance on research and development, the newer OECD definition of human capital encompasses "the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (2001, p. 18).



This new conceptualization recognizes the multifaceted way in which humans socialize, learn, and are influenced by their external environment to contribute to their well-being (OECD, 2001). Extensive research has shed light on the gaps in human capital in the Gulf region. Specifically, researchers have identified that Qatar suffers from a rising youth unemployment rate, a lack of employment in the private sector, a high skills gap between graduates and employer expectations, high unemployment and low labor market participation of Qatari women, and low degrees of entrepreneurship among youth (Osmani et al., 2016).

**The rentier state and the labor market.** Researchers examining the Arabian Gulf, particularly members of the GCC, have suggested that the incentive to invest in the development of human capital is distorted by the reliance on the abundance of wealth-producing natural resources (Beblawi, 1987; Luciana, 2008; Minnis, 2006). The financial capital generated from petroleum and oil is the source of the wealth that forms the basis of the social contract in Qatar. From an economic perspective, this relationship is referred to in the literature as a rentier state, or, alternatively, a welfare state. As discussed in the *Background*, in a rentier state, the government receives payment from foreign sources for use of its natural resources and distributes those payments to its citizens (Minnis, 2006). GCC rentier states “have created extensive cradle-to-grave welfare systems consisting of free education, subsidized housing, free medical care, and guaranteed public employment” (Minnis, 2006, p. 976). Because the burden of the provision of services rests almost solely on the government (Charles, 2015, p. 69), these rentier states are often associated with less investment, passive economies, and a politically passive citizenry.

Before taking a closer look at how the research has captured the effect of the rentier mindset on Qatari high school students, I will first explore its impact on the Qatari labor market.

Because a presumptive goal of high school education is to prepare students for future participation in the labor market, an examination of labor market dynamics may shed light on the social, political, and economic realities that male Qatari high school students face.

**Unemployment.** In addition to the benefits that Qatari males could expect to receive upon graduating from high school, which include, among other things, housing, stipend/allowance, and funding for educational travel, Qataris can reasonably expect to receive employment in a field of their choice. In the past, college graduates were almost guaranteed a job upon graduation, and unemployment was relatively low (Berrebi et al., 2009). However, despite the safety net that the Qatarization policy provides, concerns have arisen about the lack of employment, especially among the youth and among women (Berrebi et al., 2009; Osmani et al., 2016). Because Qatar's unemployment rate is fairly low, to better understand why some are concerned about its labor market, one must analyze the unemployment statistics of particular segments of the population. According to the Ministry of Development Planning and Statistics (MDPS), in 2016, the unemployment rate for Qataris in Qatar was 0.7%, of which 0.7% were males and 1.4% were females. Not only is it important to note that women are unemployed at a rate twice that of men, but among young men and young women, the difference is significantly greater. Youth unemployment is twice that of the overall population, and young women are almost 10 times more likely to be unemployed relative to young men (World Economic Forum, 2014). Below, I will explore several characteristics of rentier states that are present in Qatar and contribute to distortions in the labor market: (1) the creation of "entitled" job seekers, (2) citizen reliance upon a disproportionately large public sector, (3) a lack of accountability for citizen workers, and (4) the skills mismatch of the citizen population (Berrebi et al., 2009; Ernest & Young, 2014; Osmani et al., 2016).

***Entitled job seeker.*** An entitled job seeker is one who has heightened expectations of government benefits but shows little interest in contributing to economic development (Jones, 2013). In addition to unemployment, GCC countries face significant underemployment of youth who choose not to join the labor market due, in large part, to long lines of job seekers waiting for jobs in the public sector (Berrebi et al., 2009). In a survey of employers and students across the GCC conducted by Ernst & Young in 2015, an overwhelming majority of employers in the region attributed the difficulty of hiring and retaining GCC nationals to the high salary expectation of young nationals. Though jobs in the private sector and quasi-private sector, such as jobs in state-controlled Qatar Petroleum (QP), can offer competitive packages for highly qualified applicants, the public sector can offer more competitive salaries and remuneration. Even highly skilled employees who originally found well-compensated positions in the private sector may be eventually recruited into administrative positions in the government sector. The study also reported that students in GCC countries prioritized salary, benefits, and job security over opportunities for growth and compatibility with qualifications (Ernst & Young, 2015).

The problem is not merely that job seekers expect a high salary but that there is a misalignment between the expectations of nationals in relation to the skill set they are providing to the labor market. Private sector employers within GCC countries have accused applicants of not wanting to work hard despite wanting a high salary (Ernst & Young, 2015; Kropf & Ramady, 2015). Berrebi et al.(2009) noted that one reason Qatari women are underrepresented in the labor market is that they had a high reservation wage—the lowest wage at which they would be willing to accept a job (Ernst & Young, 2015).

The disconnect between what Qataris expect to be paid and the effort they are willing to exert on the job may be a result of changes in attitudes toward labor. It is true that the wealth of

recent decades has allowed Qataris to delegate much of the physically and technically demanding work to non-nationals (Berrebi et al., 2009; Moritz, 2015). Consequently, over time, there has been a shift in attitudes among Qataris about the types of work deemed acceptable (Berrebi et al., 2009). However, Kropf and Ramady (2015) argued that this sentiment is a shift caused by the creation of the rentier system and not an indelible cultural characteristic. To provide evidence of a shift in attitudes, Berrebi et al. (2009) pointed to the work ethic of Qataris before the existence of the oil boom created the rentier state. Moreover, the idea that an “entitled attitude” is a product of a rentier system is supported by Minnis (2006) when, in his comparison between the entitlements available to Canada’s indigenous population and those available to citizens of GCC countries, he found similar attitudes toward work among both groups. Berrebi et al. (2009) pointed to recent small changes in Qataris’ opinions of technical trades as evidence that this attitude can be transformed. Support for a change in attitude may also be seen in the efforts of the Qatari government to increase technical education by means of creating new technical schools.

***Public sector dependence.*** Despite any small changes in the perception of workers toward more menial types of labor, the objective reality is that the heavy dependence on the public sector for employment of nationals severely constrains the development of human capital in the GCC countries, including in Qatar. As mentioned earlier, rentier states are characterized by the disproportionate size of the public sector employment of nationals relative to their participation in the private sector. The public sector in Qatar employs more than three quarters of the Qatari national labor force (Coulom, 2013). Even when nationals are not working directly in government sectors, such as in schools, administrative institutions, or for the military, many are employed in state-controlled organizations such as QP and Qatar Airways (Berrebi et al., 2009).

Consistent with the attitudes expressed by employers, one reason for the reliance on the public sector is that salaries can be more competitive than those in the private sector, even for those jobs requiring few advanced skills (Coulom, 2013, p. 17). The International Monetary Fund stressed that one million nationals of oil-rich Gulf Arab states may be jobless or seeking careers in a bloated public sector by 2018 unless measures are taken to create more private-sector employment (Shahine, 2013). However, despite this reliance on the public sector, Kropf and Ramady (2015) argued that in fact, “Gulf citizens are highly motivated to ‘grow’ and to achieve something for their workplace” (p .3).

***Lack of accountability.*** Why, then, is there a disconnect between the perception of these employees and the value they may be attributing to work? The answer may lie in the dynamics of the workplace. The need to meet the demand of labor market nationalization policies (Qatarization, Emiratization, etc.) skews the traditional work/reward relationship in most GCC countries (Kropf & Ramady, 2015). These policies create an artificial constraint on the labor market because it is difficult for nationals to be fired or disciplined, thus creating a lack of accountability for incompetence or underperformance. Even in those rare circumstances that Qatari citizens are “laid off,” they are often able to continue to receive their salary and basic benefits (Berrebi et al., 2009).

Giacomo Lucian (2008), in his chapter, “Oil and Political Economy in the International Relations of the Middle East,” argued that lack of accountability is the inevitable result of the rentier state because the nature of a state where citizens are the passive recipients of entitlements but not the source of revenue (through taxation) eliminates the need for citizen oversight. In other words, citizens do not feel obligated to hold the government accountable for how it spends its money because the citizens were not the source of that money. Because the government is

responsible for the salaries of nationals, either directly to those employed in the public sector or through subsidies for those employed in the private sector, the beneficiaries of this inefficient government spending are not likely to hold the government accountable for the waste created when employees are underperforming.

***Skills mismatch and worker competency.*** Along with a lack of accountability, labor market preferences also create problems for the perception of merit and the relative competence of nationals. Employers cited a lack of work experience as a reason for not hiring nationals. In the Ernst & Young survey (2015), employers reported that they believed that for positions requiring specialized knowledge, expatriates were more likely to have the requisite education and training than were nationals. This response helps to explain why initial job seekers among Qatari nationals are facing the greatest challenges. Only recently has there been a focus in Qatar on establishing internship and training programs (Moritz, 2015).

There are frequent complaints, in both the private and the public sector, that hiring decisions are not a reflection of the skills and competencies of the workers but are based on social status. To fill quotas, employers have been known to place individuals in figurehead positions that do not meet the need for human capital (Yamada, 2015, p. 231).

These decisions have resulted in the perception that nationals lack competence and are undeserving of their positions. Even when Qatari nationals are hired, some employers stated that they were hired for their soft rather than technical skills. In particular, Qataris were hired to provide access to local networks rather than for “leadership quality,” “communication skills,” or “ease of training” (Ernst & Young, 2012). One could argue that, in addition to the labor policies, a motive for private sector hiring of nationals was to confer connections to companies to build their status within a community and increase their sustainability in a market. Moreover, after

being hired, some may find their abilities to advance within the job effectively constrained.

Whereas some attribute the lack of retention at private firms to the entitled disposition of Qatari workers, others point to it as evidence of a lack of job satisfaction (Moritz, 2015; Osmani et al., 2016).

This employment environment, where nationals are perceived as having fewer skills but are given incentives to remain in positions, cultivates a labor market of reduced trust that, as mentioned earlier in this *Literature*, stifles innovation and creativity. Reduced trust can contribute to strengthening group solidarity in a manner that incites divisions between nationals and expatriates and ultimately reduces opportunities for cooperation and collaboration. Collaboration is essential to the formation and transmission of human capital, particularly in a nation that “rents” human capital from a large foreign population. When employees adopt the “us versus them” mentality, they are unwilling to create bridges that would foster the flow of information and build shared capacities. This creates a dilemma where expatriates are seen both as undesirable competitors for jobs and as necessary for the sustainability of the rentier state in providing necessary skilled and unskilled labor used to extract the rented natural resources.

Along with the inability to take risks to form collaborative relationships, the security net provided by the rentier state creates individuals who are not taking risks to advance their skills and diversify the labor market (Ernst & Young, 2012; Jones, 2015; Moritz, 2015). The fear of failure is prevalent among employees, and people are unwilling to leave their well-paid, or secured, positions to engage in the uncertainty of small business entrepreneurship. Evidence of this attitude may be seen in a 2013 national survey of Qatari youth. In the survey, goals for post-education employment were expressed, not in terms of challenge or skill, but instead in terms of stability, “peace of mind,” and opportunities for leisure (Qatar Youth Initiative Steering

Committee, 2013). In one study, Qataris expressed an unwillingness to take challenging jobs. When asked about the importance of the private sector, only “approximately a fifth of respondents (19%) felt the private sector was extremely (8%) or very important (11%) for the employment of Qatari nationals. The majority (69%) felt it was merely somewhat important. Moreover, 12% felt it was not important” (Benchiba-Savenius et al., 2016). These sentiments are evidence of a lack of motivation to seek challenging goals and reflect a general lack of motivation among the broader labor force.

**The effect of the rentier state on students.** The economic and political realities explored above create constraints on Qatari male students. Given the effect of the rentier state on the labor market, it is plausible to assume that a relationship exists between the “entitlement” structure of the Qatari economic system and the education outcomes of Qatari public school students. For example, an examination of the PISA exam results for 2012 indicated that “there was a significant negative relationship between the money countries extract from national resources and the knowledge and skills of their high school population” (Friedman, 2012). Qatar was only one of two of the 65 participating regions that stood out as having the “highest oil rents and the lowest PISA scores,” and this finding was reinforced by the performance of students from other oil-rich nations on an alternative international test, TIMSS (Friedman, 2012). Ultimately, two phenomena, the availability of economic opportunities that constrain the labor force in a rentier state and the strengths of social networks, might create a culture that discourages male students in Qatari public high schools from the pursuit of academic excellence.

**Academics and economic opportunities.** The first observable impact of the economic system on the Qatari education system is on the nature of the institution itself. The argument advanced by many in the literature is that the Qatari education system has failed to adequately



prepare Qatari nationals with the appropriate technical skills for employment in a competitive labor force. Essentially, the workforce supply is not aligned with market demand. This misalignment remains despite evidence to improve schools' curricular content, including the curriculum reforms undertaken by the Qatari government (Ernst & Young, 2012), and despite the public recognition of the problem by the Ministry of Education in Qatar. Moreover, students themselves are aware that they are lacking in necessary skills. Qatari students ranked their country second to the least (Saudi Arabia is first) among all of the GCC countries to believe that their education is equipping them with the right skills and training for their chosen careers. Only 55% of male Qatari students and 61% of females believe that their education is preparing them for their career choice (Ernst & Young, 2012). The same report indicated that even when opportunities to improve technical skills are made available through training and internships in the private sector, females were more likely to be beneficiaries than were males (Ernst & Young, 2012).

Along with the institutional affects, the choices of Qatari students are directly affected by the human development challenges of the rentier state. Though there are similarities among rentier states, the public signals of the safety net provided by governments have different magnitudes in different GCC countries. A report found that unlike in some other countries in the GCC, in Qatar, 70% of students aimed to work in the public sector. This is in contrast to Saudi Arabia and Bahrain, where less than 50% of students reported having such intentions. Students shy away from STEM subjects and tend to focus on the humanities and social sciences. Qatari youth, even when equipped with the necessary skills, are choosing not to participate in the labor market at times, waiting many years to find the right job (Osmani et al., 2016). This reality paradoxically coexists with the following finding:

GCC national youth have high levels of extrinsic motivation (90%) as well as significant levels of intrinsic motivation (84%). Hence aspects such as external rewards recognition and validation are as critical for the younger generation as a feeling of purpose, belonging and contribution to developing themselves, their communities and their nations (Punshi et al., 2015, p.166).

How could youth have high levels of motivation yet continue to have poor indicators of achievement? My first hypothesis anticipates that the perception of greater labor market opportunities, those associated with the privileges of the rentier state, will be correlated with lower test scores. One mechanism by which this could occur is if Qatari male students perceive the rentier state as limiting or constraining their labor market choices by virtue of the difficulties in finding a job that meets one's expectations (public sector, high pay, etc.). John Ogbu (1987) proposed that differences in academic performance of minority students in the United States were caused, in part, by the perception of minorities and their responses to the school environment. In part, these differences were due to an adaptation to barriers in the opportunity structure available for adult employment. What is meant by "opportunity structure" is the rewards associated with academic credentials, such as employment opportunities and wages (Ogbu, 1987). Ogbu found that when students perceive that academic effort will not avail them of market or higher learning opportunities, they adjust their effort on academic tasks downward. Gould's (1999) findings are consistent with those of Ogbu (1987). He argued that because most inner-city African-Americans have correctly perceived that their achievement of educational and occupational success is less probable than those of other groups, their achievement behaviors deviate from other students, even though they subscribed to the same "mainstream" values. Gould (1999) argued that if the opportunity structures of inner-city African-Americans

improved, their expectations, and eventually their behaviors, would change. These researchers assume that the common way to achieve success is through investment in education. In other words, if I study, persist, demonstrate effort, and achieve credentials, I will attain my reward. However, what Qatari students value may not be based on a human capital investment strategy but instead may reflect rewards assigned by status and prestige. In this way, having opportunities accessible to a student without needing to invest in education may lead to a lack of investment in education.

One way that a lack of investment in education may be reflected in schools is in the level of effort students apply to different subjects. In particular, classical Arabic has become merely a symbolic language portraying significant traditional and cultural value but limited economic value in the labor market (Al-Attiyah, 2013). On the other hand, the subjects of English, math, and science hold significant economic value. Because of its apparently limited value in the labor market, students may choose not to invest in learning Arabic and may instead invest in subjects that have more economic value. However, students who support traditional values may continue to invest effort into learning classical Arabic and achieve strong academic outcomes due to the ease of the subject and the relative lack of effort of their peers.

Drawing on the theory of “bounded opportunity” as a premise for why student attitudes may conflict with their academic performance, Mickelson (1990) argued that students’ attitudes toward education take two forms: Students have abstract attitudes that express the basic “dominant American ideology that holds that education is the solution to most social problems” and concrete attitudes that are instead “derived from a person’s experiences in her or his family and community” (p. 46). The concrete attitudes differ from the abstract in that they adhere to neither “ideological shibboleths nor hopes for the future (Mickelson, 1990, p. 46). Mickelson’s

analysis is consistent with those of Bourdieu (1984), Coleman (1988), and Chai (1999), who emphasized the manner in which experiences shape and constrain beliefs and perceptions. The Human Capital Vision of the Qatari National Vision of 2030 states that values and education are at the basis of a sustainable society. This principle is reflected in Qatar's national constitution. These visionary statements reflect what Mickelson (1990) called an "abstract" attitude toward education. To what extent is abstract attitude, which is objectively expressed in the national document and subjectively internalized by male Qatari high school students, bounded by their experiences?

In examining what drives and motivates the youth in Qatar to work, several surveys explained that Qataris are not only motivated to work for monetary benefits, but they are also driven due to a sense of commitment and responsibility toward their country (Benchiba-Savenius et al., 2016). In this regard, the abstract values Qataris place on their national identities may contribute to positive outcomes. On the other hand, research has demonstrated that there is a negative relationship between entitlements, that is, the expectation that one will receive benefits, and the efforts made to attain those benefits (Kopp et al., 2011). For example, studies have shown that students who had a sense of entitlement were less likely to regulate their learning behaviors and more likely to seek out answers rather than seek out approaches to learning (Kopp et al., 2011). It has also been shown, in the context of work, that employees are more likely to decrease efforts when employment guarantees are in place (Riphahn & Thalmaier, 2001). These findings may support the idea that entitlements do not have a uniform negative effect on all Qataris. Instead, the entitlements of the rentier state may lead some Qatari students to want to achieve more, whereas others may reduce effort either because of opportunities easily available to them or because opportunities, although appearing plentiful, are constrained.

**Social and civic engagement.** In addition to entitlements, another potential disincentive for investment in academic effort is that the strength of *wasta* could signal to students that education is not valued. My second hypothesis predicts that among the sampled Male Qatari high school students, high perceptions of social status or *wasta* will be correlated with lower exam scores. As explained earlier in this *Literature Review*, the strength of *wasta* is that it makes things work for people, or “humanizes bureaucracy” (Charles, 2015, p. 72). However, *wasta*, in terms of youth nearing the entrance of the labor market or in the pursuit of higher education, could create disincentives when it appears as if academic effort is not the vehicle for achieving rewards. The Talent Enterprise 2015 found that in GCC, *wasta* was the main source of finding a job for students through their families, friends, and connections compared to their college placement counselors (Punshi & Jones, 2016). Interestingly, the sentiment was consistent across nationals and expatriate groups. Extensive research in the region has shed light on sentiments surrounding *wasta*, both good and bad. What is not known is the extent to which students alter their investment in education as a result of their recognition of the importance of networks. It may be that the bounded opportunities Qatari youth face in the labor market send a signal that alters the concrete valuation of education in light of the realities of the relative rewards gained by *wasta*.

How does the closed mentality of the rentier state citizen contribute to academic outcomes? My third hypothesis is that low participation in civic activities will be correlated with test scores. As we discussed earlier, research supports the idea that education has a positive effect on civic engagement through an increase in social capital obtained (Davila & Mora, 2007). However, studies have also suggested that civic engagement could influence academic achievement. Davila and Mora (2007) found that participation in both student government and

community service positively affected students staying in school and obtaining a college degree compared to those who did not participate in community service. These findings held even when measuring the academic persistence and attainment of students who said it was very important to help others (Davila & Mora, 2007). Other studies have corroborated those results, finding that participation in civic activities yielded greater learning and increased graduation rates in K–12 schools, community colleges, and four-year institutions (Cress et al., 2010). Civic engagement improves students' absorption of academic content through the practical application of theoretical concepts. When participating in their larger community, students are able to improve critical thinking, verbal and written communication, and other technical and analytical skills, as well as benefit from exposure to diverse perspectives.

One reason it is important for Qatari boys to extend their social networks beyond that of kin and like-minded associates is that Qatar's economic security is heavily dependent upon expatriates, both high- and low-skilled workers. The huge disconnects between the dominant sources of human capital, the means of production, and the citizenry require a bridging mentality. If Qatar's vision of increased economic security is to be achieved, it will require increased achievement on the part of Qatari boys, as well as greater interaction with and acceptance of members of its disproportionate expatriate population.

To determine why Qatari boys continue to underperform academically, I advance the following hypotheses: (1) the perception of greater labor market opportunities among Male Qatari high school students will be correlated with lower exam scores; (2) high perceptions of social status (*wasta*) among male Qatari high school students will be correlated with lower exam scores; and (3) low participation in civic activities among male Qatari high school students will be correlated with lower student exam scores.

## METHODS

### **Introduction**

With respect to my overarching research questions, I am investigating factors that may explain the underperformance of Qatari male students. Specifically, I have examined how male Qatari high school students internalize social values and economic and political policies as “signals” that inform and are reflected in their attitudes toward education and achievement. My research focuses on the academic achievement of Qatari male students in grades 10, 11, and 12 who attend public high schools in Qatar operated by the Ministry of Education. Using a survey method provides an opportunity for me to capture a representative sample of Qatar’s high school student population, which will allow me to make generalizations about Qatar’s youth that will inform policymakers.

In the methodology section, I will begin by explaining how I developed the survey questions. I will describe my sampling strategy and conclude by presenting my approach to analyzing the survey data.

### **Survey Development\***

\*Please see APPENDIX A for survey questions.

### **Hypotheses and Operationalization**

**Hypothesis #1 (economic entitlement).** The perceived level of effort needed to obtain greater labor market opportunities will be negatively associated with exam scores. I posit that as perceptions of economic entitlement increase, such as the perception that the government guarantees jobs for Qatari citizens, students will see little value in education and will thus not

invest time in their studies. The key construct for this hypothesis is students' perceptions of their entitlement. The primary question is whether Qatar's economic entitlement policies for Qatari citizens lead boys to believe they do not need to work hard in school.

Perceptions of entitlement policies are likely to have a differential negative impact on boys' achievement because girls traditionally had little means to utilize these entitlements because the classical job available to them was teaching. With the current economic boom, Qatari women are no longer tied to traditional jobs of teaching or even working for the government. An increasing number of women are seeking employment in the private sector and thus are more likely to view education, rather than entitlement, as being instrumental to success.

One category of questions I developed to tap into this construct relates to perceptions of entitlements (e.g., "The government guarantees me a job"). Questions about perceptions of entitlement either focus on the respondent as an individual (i.e., he or she uses the first-person pronouns "I" or "me") or on the respondent's view of society (i.e., general statements about entitlements in Qatari society). This distinction is important because a student may hold a specific belief about society in general without believing that perception to be true of him or herself. For example, a student who believes that "Qataris are guaranteed a job upon graduation from high school" may still choose to work hard and do well in school because he or she believes that education is important. Other questions related to economic opportunity examine perceptions of accountability or responsibility (e.g., "A government job will not require a lot of effort from me"), and others focus on students' motivation (self-efficacy: e.g., "A challenging task would not inspire me to work harder").

**Hypothesis #2 (social networking and value of education).** Higher perceived value of social status (*wasta*) will be correlated with lower exam scores. The key construct for this



hypothesis is students' perceptions of the value of social networking and of education. The primary question is whether social networking leads boys to believe that education is not the pathway to success in social life and in job seeking. The construct called *wasta* (connections) may relate to underachievement. Many questions are designed to tap into students' perceptions of whom they know (e.g., "My relatives and contacts will help me get a good job regardless of my academic performance") versus what they know (e.g., "Doing well on tests is important to me").

**Hypothesis #3 (civic engagement).** Participation in civic activities will be positively correlated with exam scores. This construct reflects students' perceptions of their openness toward others who are different from themselves. Questions fall into two categories: bridging (e.g., "I am comfortable with our country's openness to different cultures of the world") and bonding (e.g., "I believe that non-Qataris should not have the same privileges as Qataris").

### **Question Review**

After developing the survey, I consulted experts in the field of education and research methods to review the survey and to assess the applicability of the constructs to the targeted population. The Social and Economic Survey Research Institute (SESRI) experts assessed the survey and translated it into Arabic. We then randomly selected eight students from one boys' public high school and one girls' public high school and got permission from the principals and parents to include the students in a focus group to help us assess the validity of the survey questions.

### **Focus Group**

A group of eight boys and a group of eight girls participated in separate focus groups employing the think-aloud format (i.e., a volunteer reads each question aloud, and the focus group

participants discuss the question) to separately assess how boys and girls perceive the questions. The purpose of this exercise was to examine the preliminary results and determine how well the survey works in the field. The focus group improved the question wording so that the final survey would be more relevant and easier for students to understand.

### **School Pilot**

We then piloted the survey in two rounds, surveying 120 Qatari high school students. First, we selected one boys' public high school and one girls' public high school, and then we administered the survey to one additional boys' and to one additional girls' school. In the first round, the boys and girls had almost identical concerns and confusion as to what certain questions really meant (e.g., the difference between a government job and a semi-government job). Other participants were not sure of what certain vocabulary, such as "broader life experience," really meant. All of the concerns that were raised in the first round were addressed in the second round. For example, to address the issue of confusion about the definition of a government job, the survey was revised to provide explicit examples of government jobs, which are fully funded by the government, and semi-government jobs, which receive 50% of their funding from the government and 50% from the private sector. In the second round, we did not encounter additional substantive concerns with the survey questions.

### **Survey Design**

In this section, I will explain how I selected my study sample. I selected boys and girls in public high schools (grades 10, 11, and 12) in Qatar to participate in a cross-sectional survey. I chose public high schools because they primarily comprise Qatari students, and all public high school students take the same national standardized tests. Other private and international schools in Qatar do not participate in the same test.

## **Target Population**

In this study, the target population includes Qatari high school students in grades 10, 11, and 12 in public high schools in Qatar. The target population excludes students who do not attend public schools and those who are not in grades 10 through 12. It also excludes those who are not attending school, even if they are high-school age. SESRI developed the sampling frame based on a comprehensive list of all public high schools in Qatar provided by the Ministry of Education (MoE). In this frame, all public schools are listed with information about school name, address, municipality, gender assignment (male or female), and number of students in the target grades. It is important to note that there are no coeducational public schools in Qatar.

Based on the results of the pilot study and an agreement with the MoE, trained interviewers and myself surveyed approximately 2,200 high school students (1,120 boys and 1,080 girls) over two weeks. The MoE is a central public agency of Qatar that collects and retains detailed demographic and academic records of each student.

## **Sampling Approach**

We have sampled all 47 Qatari public high schools. Four schools refused to participate; thus, the total number of schools in my data is 43. Because we have access to the centralized data maintained by the MoE, it is possible to randomly draw names of classrooms to participate in my survey until I reach my sampling target. Because classrooms have few or no Qatari students, I have sampled two classrooms from each school in order to get a sufficient number of Qatari students in each school. SESRI called each school to obtain the most updated list of Qataris in school and then randomly selected classrooms from the list. SESRI has completed the random selection of participants and stratified them by grade level in order to obtain a representative

number of classrooms from each grade. In doing so, we are able to reduce sampling variance and thus improve the sample's representativeness.

Data collection occurred over two weeks in the beginning of May 2016. In the first week, we selected a classroom per grade in each school. We repeated this in the second week, selecting another classroom per grade in each school. The total number of classrooms selected per school is two classrooms per grade.

### **Survey Administration**

After an appropriate peer and supervisory review, I, as a principal investigator, administered the survey in conjunction with SESRI researchers and administrators. Due to MoE rule, I had to obtain permission to enter some of the boys' schools because I am female, though, due to social desirability bias, I was encouraged not to administer the surveys in the boys' schools. Thus, the male administrators on the SESRI team were responsible for administering the survey at these schools. SESRI directly employs these male administrators, some of whom are researchers and others of whom are administrative staff.

### **Sampling Frame**

Based on grade level, the sampling frame is divided into grade levels 10, 11, and 12, which are treated as strata in a stratified sample. In the first round of selection, one classroom is randomly selected from each grade (stratum) in each school. This approach gives each student in the sampling frame an equal chance of selection while allowing students to be randomly chosen from each classroom in each stratum. In the second round, another classroom in every grade is randomly selected in each school. Finally, all Qatari students in the class are included in the survey. If the classroom had few or no Qatari students or if the Qatari students were absent, then another classroom is randomly selected. For example, if a school offers all three grades—10, 11,

and 12—then one class for each of the three grades is selected (for a total of three classes in the school) and all Qatari students in each class are included in the sample. Because schools randomly assign students within a grade to a class, the number of Qatari students within each class is generally comparable.

This sampling strategy provides an opportunity to assess the attitudes and perceptions of Qatar’s high-school students. The survey allowed me to identify attitudes and influences that may contribute to students’ achievements; thus, my research will help policy makers develop policies and programs that can help improve students’ academic performance in Qatar. This survey can be administered each year using the same cross-sectional survey design or a panel design to help measure and understand how changes in government labor-market policies affect boys’ achievement.

### **Survey Weights**

The survey weights are calculated using SESRI’s model and are based on three components. The first part of the base weight is the probability of selecting a school, then the probability of selecting a classroom, and finally the probability of selecting eligible students. The second part adjusts for nonresponse, such as student refusal or school refusal to participate. The third part of survey weights is to match the sample statistics to the national population of public high-school students.

In addition, weight trimming is also used in case there are any highly variable weights that would introduce undesirable variability.

## **Survey Analysis Methods**

The focus of this analysis is to explore the reasons why male Qatari students are performing poorly on national standardized tests.

### **Data Analysis**

The two broad goals of the data analysis are to assess factors that help to explain variation in boys' achievement and factors that explain differences between boys' and girls' achievement. The first stage of the analysis presents data to describe the distribution of responses for boys and girls for each variable in the study. As this is an original survey, this descriptive information is informative on its own because there is scant extant research into Qatari students' perceptions. In the second stage, I run a factor analysis to identify underlying themes (or factors) related to each hypothesis. Given the nature and quantity of the survey questions, it is not possible to create factors that capture students' underlying economic and social attitudes and perceptions. Having created these factors, I estimate factor scores for each student and use these factor variables as predictors in regression models to identify relationships between student achievement and each factor, controlling for prior achievement, grade level, school, and student and parent characteristics (see Table 2 for a list of these control variables).

In regressions with factor scores as independent variables, I run six regression models for each hypothesis, or two models for each core subject—math, Arabic, and English—in which one of the models included prior achievement as a control variable; the other did not control for this variable. In the final results, I leave out the third hypothesis because there is too much nonresponse and a lack of meaningful results.

Controlling for prior scores allows us to make inferences about how a change in perceptions across students is associated with learning. In addition, to identify gender's impact on students' perceptions, I run separate models for boys, girls, and all students. All of these models are fixed-effect models that control for school selection to account for the clustering of scores and responses between students in the same school.

### **Growth Score Models Versus Achievement Levels Models**

When we control for prior scores, we see the average expected change in achievement growth for each point of change in students' perceptions. When we do not control for prior scores, we estimate the average expected change in achievement levels for each point of change in students' perceptions. This is different than looking at models with prior scores in which we are describing average changes in academic learning or declines. Additionally, prior achievement should explain a larger share of the variance in achievement compared to models without prior scores. Models that control for prior scores (growth models) have gained traction in education-policy research in light of the fact that they can help improve the usefulness of the results aimed at enhancing student learning and the explanatory power and accuracy of the model (Center for Public Education, 2007).

Due to an education policy change in 2016, the MoE is no longer conducting national standardized testing on a yearly basis. Thus, all test scores are collected before measuring students' perceptions in my study. This leads to a reverse causality problem in which the dependent variables (students' academic achievement) have been measured before the predictors (students' economic incentives). Because perceptions are believed to be relatively stable over the short run, one can argue that students' perceptions from 2016 survey data should be

approximately the same as they would have been had they been collected before the achievement data (Milfont et al., 2016).

### **Dependent Variables**

High-school students in Qatar take national standardized exams in all core subjects (Arabic, math, English, and science). Because we collect students' national identification numbers, the MoE can link my surveyed students with their scores on these tests. The MoE provided me with students' national standardized test scores for all of these subjects for the past three years (2013–2015). However, not all students take these subjects each year. Students' scores may be missing due to absenteeism, illness, or school-system transfer, such as from a private school to a public one. For the core subjects of math, Arabic, and English, less than 10% of test takers of each subject are missing from the sample.

To capture student achievement, I standardize test scores for each student across the subjects of math, Arabic, and English. These scores are standardized by subject, year, test level, and grade level for each unique test; thus, each test taker is compared to other students who took the same test. Note that, as explained by the MoE, there are three test levels: Test level 1 is “foundation,” 2 is “advanced,” and 3 means the test has no level. After estimating all means and standard deviations for the different tests within the same subject, I average the  $z$  scores for all combinations of year, test level, and grade level for each dependent variable.

***Performance by subject.*** In examining academic test scores by subject, one might assume that differences in students' performance can be explained by the skills required to master each subject. Internationally speaking, math is considered a difficult subject for many students because it requires analytical and problem-solving skills that many students may not learn at home; thus, students may find math questions difficult to master. In contrast, learning languages,



such as Arabic and English, would be less challenging for Qatari students, as these subjects tend to focus more on memorization and can be learned at home. In Qatari public schools, languages are taught using rote memorization, and evidence is not as conclusive regarding critical thinking and the mastery of languages as it is for critical thinking and math. Thus, I assume that Qatari students will find language tests to be easier than math tests. Moreover, as Arabic is the national language in Qatar, student performance on Arabic tests might be higher than on English tests, as English is taught as a foreign language. However, by standardizing these subjects, all of these tests are put on the same scale, which eliminates the level of difficulty across subjects. I assume that Qatari male students will do academically worse than their female counterparts across all subjects.

### **Independent Variables**

The descriptive Tables 1 through 5 below (see descriptive results below) provide information on all independent variables in this study.

**Prior score.** In Table 1 is the most recent standardized achievement score for each student before the year 2015; note that 105 students in the sample had no test scores in any subject in 2 of the 3 years of achievement data; thus, these students do not have prior scores. Most of the prior scores are based on 2014 tests; however, approximately seven to 14 students had no 2014 scores but had 2013 scores, so their prior score is derived from their 2013 results.

**Student characteristics.** The following characteristics are included: gender (1 = *girls*, 0 = *boys*); age (broken into fraction of a year); high-school graduation confidence (4-point scale from *not confident at all* to *very confident*); students' educational expectations (expected years of schooling; note that this variable is not included in the analysis due to collinearity with the next question); students' plans after high school (I will not finish high school, I will enroll in college

or a university in within Qatar, I will plan to enroll in a college or a university abroad, I plan to work immediately after finish high school, I have not decided what I want to do); students' expectations regarding jobs and it is compared to military job aspiration (see job titles in Table 2a).

**Parent characteristics.** Parents' education is measured by years of schooling (not used in the final analysis due to high nonresponse rate and questionable accuracy because many students did not know their parents' education levels). Parents' occupation status is defined as the sector of employment, such as governmental, semigovernmental, private, and so on).

### **Factor Analysis**

Each of my hypotheses includes many survey questions designed to measure latent constructs. Therefore, I run a factor analysis to determine the extent to which a factor or factors that describe underlying patterns in the questions are associated with each hypothesis. An additional use of factor analysis is to reduce the number of variables in the subsequent regression models to increase the degrees of freedom in the subsequent regression analyses. Because factor analysis assumes that the survey questions are continuous variables but most of my questions are on an ordinal scale (four-point agreement scale), I use polychoric correlations in the factor analysis, which corrects the correlation matrix for the discrete nature of the survey questions used in the analysis. Having adjusted the correlations, I then run a factor analysis using the principal-factors method on the polychoric correlation matrix to extract factors from the correlations. I use the varimax-rotation technique because it makes the factors as distinct from each other as possible and makes them orthogonal. I obtain a pattern of loadings on each factor that is as diverse as possible. After rotating the factor solutions, I keep factors that have eigenvalues greater than 1 because these factors capture substantive patterns in the data and

assess the reliability of the resulting factors using Cronbach's alpha. To test for reliability, I estimate Cronbach's alpha for each factor, which examines the likelihood of finding the same factor if I administer the survey to a different sample of students. A Cronbach's alpha of .7 or above is the generally accepted threshold for reliability.

To test whether the survey questions relate to latent variables, I run a factor analyses on eight groups of variables. The first hypothesis examines entitlement, including all subquestions under Questions 14, 15, and 16 in the survey that tap into the entitlement construct. The second factor analysis explores the subquestions of Questions 17 and 18. These questions are related to social networking (the concept of *wasta* and value of education). I do not include a question asked only of boys (q17\_11). The last factor analysis incorporates questions related to civic engagement (Questions 26 and 27 in the descriptive table), which considered the bonding- and bridging-society constructs.

## RESULTS

### Descriptive Analysis

#### 'Dependent Variables

The descriptive tables portray information regarding students who students' who agree or strongly agree with the respective statements on 4-point scale from strongly disagree to strongly agree. Asterisks indicate the level of significance  $s$  for  $t$  tests (difference in means) or chi-square test for categorical questions. Moreover, asterisks next to a question set indicate significant relationships across all statements belonging to the set.

Table 1 below examines each standardized dependent variable (math, Arabic, and English), with a focus on documenting the gender achievement gap. Overall, girls outperform boys across all subjects. In looking at achievement by grade and gender, the gap increases with grade level. It appears that the achievement gap between boys and girls increases by grade level. Overall, girls score approximately 0.42, 0.57, and 0.25 standard deviations ( $SDs$ ) higher than boys in math, Arabic, and English, respectively. In English, however, the achievement gap between girls and boys is smaller.

Table 1

*Standardized Achievement Scores by Subject and Grade in Each Subject*

	<b>Math<sup>a</sup></b>		<b>Arabic<sup>a</sup></b>		<b>English<sup>a</sup></b>	
	Boys	Girls	Boys	Girls	Boys	Girls
Overall	-0.22***	0.20	-0.30***	0.27	-0.14***	0.12
Prior Score <sup>a,b</sup>	0.05***	0.04	-0.11***	0.10	-0.06***	0.06
Grade Levels						
Grade 9	-0.17***	0.14	-0.05	0.04	-0.01	0.01
Grade10	-0.24***	0.23	-0.50***	0.44	-0.20***	0.17
Grade 11	-0.25***	0.29	-0.33***	0.38	-0.23***	0.25
<i>N</i>	1,012	1,024	1,012	1,024	957	1,025

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

<sup>a</sup> This measure has been standardized to have an *M* of 0 and an *SD* of 1.

<sup>b</sup> Standardized test scores for 2014 and 2013.

The relationship between each dependent variable and gender and municipality is captured graphically to facilitate an understanding of how student achievement varies according to gender and municipality. Al Khor and Madinat Al Shamal are northern municipalities in Qatar that are far from cities and have less population density than other municipalities. Umm Slal and Al Daayen are municipalities located in the northeast region of Qatar. Al Wakra is a municipality located in the southern region of Qatar. Al Rayyan is a very large municipality in the western Qatar. The municipality of Al Rayyan is comprised of a larger Qatari population than the other municipalities, and it is where the majority of Qatari public high schools are. Although some schools are located in the very remote rural region of Al Rayyan municipality, many of its schools are situated in closer proximity to the nation's capital city of Doha. The Doha municipality is the site of Qatar's capital; it is in eastern Qatar. Figure 1, 2 and 3 show the mean achievement for each gender in each subject and the 95% CI around the mean in each municipality. Overlapping of the confidence intervals of boys and girls suggests no gender gap in

achievement. However, when confidence intervals overlap the line at zero, this suggests that the achievement of students is no different from average achievement across the whole sample.

Female students outperform their male counterparts in all subjects across all municipalities, except for Madinat Al Shamal. In Figure 1 below, girls outscored boys and scored above average in math, except for in Al Rayyan and Madinat Al Shamal. It should be noted that the appearance of higher scores in math among male students in Madinat Al Shamal is not significant at the 95% CI compared to the math scores of female students in Madinat Al Shamal. In Figure 2, the same pattern appears for Arabic, in which girls outperformed boys across all municipalities. Figure 3 shows a different pattern of performance for girls, in which they either score below average, such as in Al Daayen, or are equal in performance to boys.

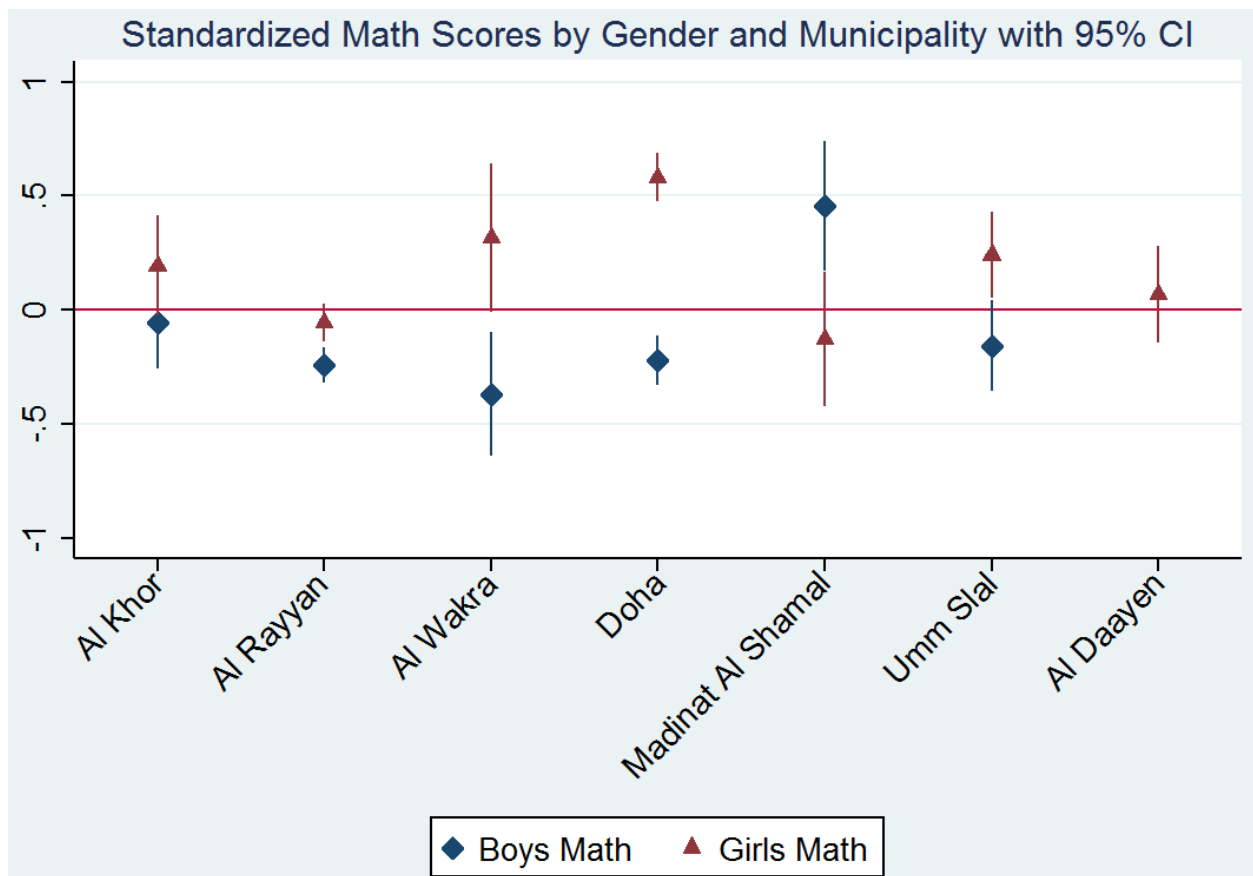


Figure 1. Standardized Math Scores by Gender and Municipality among Qatari High School Students. Source: Qatar Ministry of Education and author's survey data.

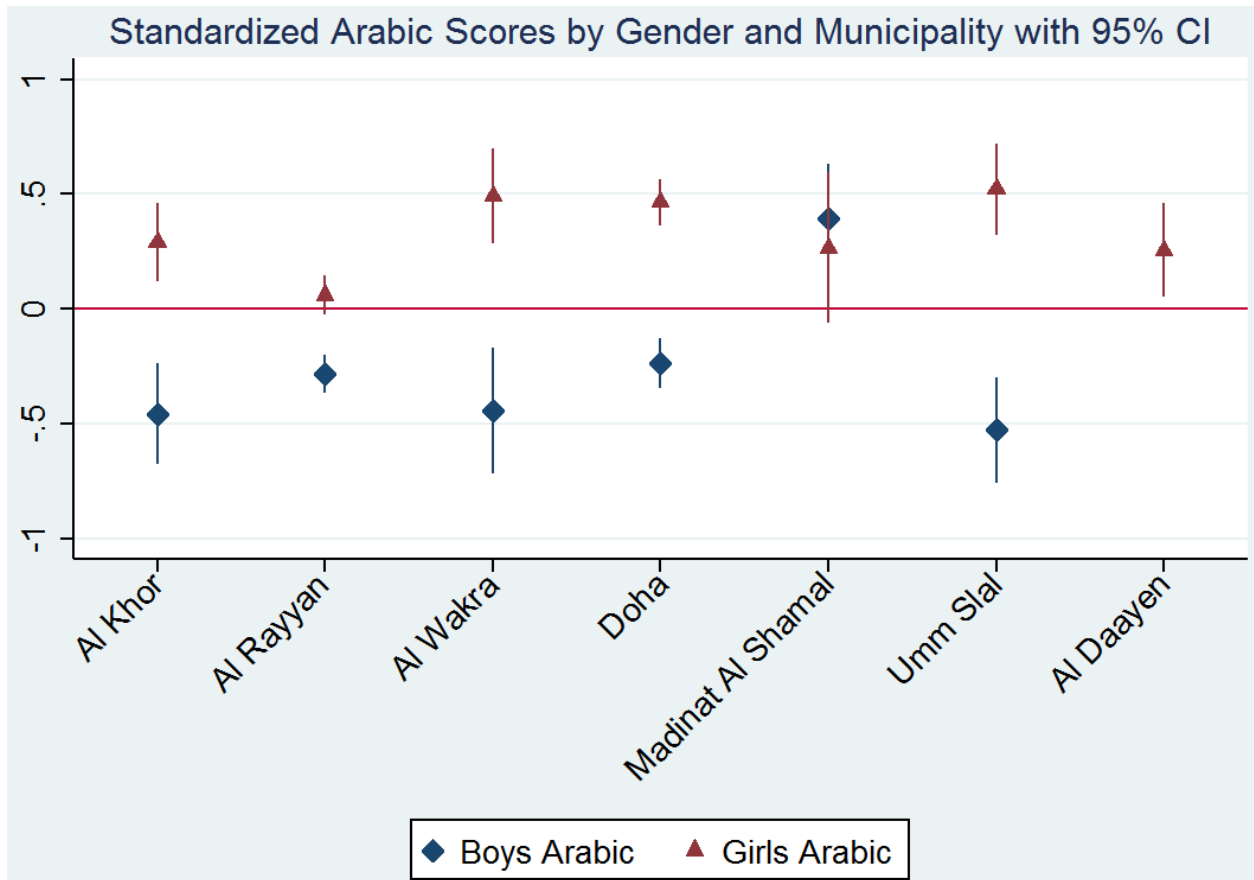


Figure 2. Standardized Arabic Scores by Gender and Municipality among Qatari High School Students. Source: Qatar Ministry of Education and author's survey data.

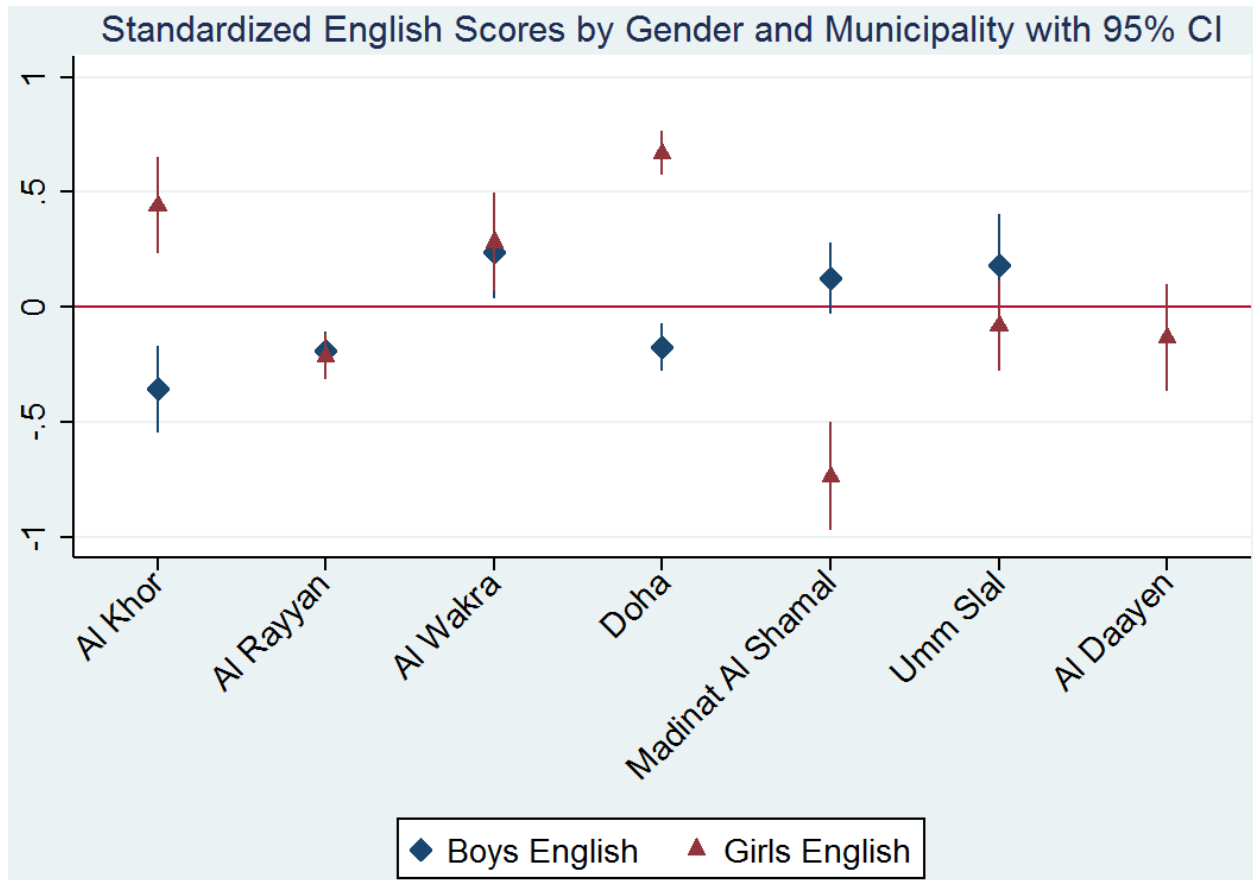


Figure 3. Standardized English Scores by Gender and Municipality among Qatari High School Students. Source: Qatar Ministry of Education and author’s survey data.

**Control Variables: Table 2a**

Students’ prior scores for 2013 and 2014 were collected from the MoE data in the subjects of math, Arabic, and English. Table 2 indicates that male students outscore female students by 0.05 *SD* in math. However, female students do better in their prior scores in Arabic (0.10 *SD*) and English (0.06 *SD*).

Even though both male and female students were highly confident that they would complete their high-school education, females were slightly more confident. Girls were 98.29% confident that they would graduate from high school, whereas boys were only 94.22% confident.



Moreover, boys reported an expectation of finishing 13.29 years of schooling, and girls reported an expectation of completing 13.59 years of schooling. This suggests that on average, boys have lower expectations of education completion. However, both girls and boys believe that they will attain education beyond high school. Additionally, when asked about plans after high school, 4.21% of boys reported that they would not complete high school, whereas only 0.31% of girls did. Boys were approximately 3 times more likely to report planning to work immediately after finishing high school and 2 times more likely to not know what they wanted to do after finishing high school.

For both boys and girls, the intention to enroll in postsecondary school programs reflected traditional gender-role expectations within Qatari society. For example, 72.9% of female students stated that they would enroll in college or university in Qatar relative to only 36.52% of male students. That said, 35.05% of male students reported that they plan to enroll in a college or a university abroad, whereas only 15.9% of female students planned to do so.

The question concerning career expectations reveals sharp differences between male and female students' job expectations. Military and police careers were favored among male students at 48.45%. Only 2.42% of female students reported military and police careers as their preference. Girls were 4 times more likely than boys to express the desire to work in the medical field and 2 times as likely as boys to choose a career in business. Due to the expansion of opportunity in Qatar's economy for women, teaching is no longer the typical job sought by Qatari female students. The data indicated that only 7.68% of female students expect to become teachers in the future. Even though the Qatari economy has grown, the data also indicated a very low 0.37% of boys and 0.22% of girls indicating an interest in working for semigovernmental organizations such as petroleum companies.

With respect to parent characteristics (Table 2b), both male and female students reported that their fathers had completed 12.3 years of school in comparison to only 11.4 years of school for boys' mothers and 11.9 years of school for girls' mothers. Because parental education included an "I don't know" response, this question resulted in approximately 10% nonresponse for mothers and fathers. Additionally, according to the field notes, students were uncertain about both their parents' education levels and employment sectors. More than 50% of boys and girls reported that their fathers worked in government organizations, and more than 30% of boys' and girls' mothers were housewives. The retirement percentage among boys' and girls' parents was also high. A total of 28.13% of boys and 24.60% of girls indicated that their fathers were retired. Only 16.25% of boys and 13.5% of girls reported that their mothers were retired.

Table 2a

*Student Characteristics*

	Boys	Girls
Gender (%)***	49.1	50.9
Age (in years)	17.1	16.9
Q.10 High School Graduation Confidence (%)***	94.22	98.29
Q.11 Students' Educational Expectations (%)***	10.5	12.3
Q.12 Students' Plans after High School (%)***		
I will not finish high school	4.21	0.31
I plan to enroll in a college or a university within Qatar	36.52	72.9
I plan to enroll in a college or a university abroad	35.05	15.9
I plan to work immediately after finishing high school	10.12	2.91
I have not decided what I want to do	14.1	8.01
Q.13 Students Jobs Expectations***		
Military (military and police)	48.45	2.42
Teaching (schools, professors, psychologist)	1.04	7.68
Lawyer	3.26	12.65
Medical (nurse and doctors)	1.22	10.12
Scientist (researchers, engineers, and science)	11.96	13.61
Businessman (bank, private sector)	8.62	18.39
Government (diplomat, media person, social worker)	11.47	12
Semi-government (petroleum companies)	0.37	0.22
Others (have not decided yet, and multiple aspirations)	13.63	22.89

Table 2b

*Parent Characteristics*

	Boys	Girls
Q.2 Fathers' Years of Education (in years)	12.3	12.3
Father's Current Employment Status (%)***		
Governmental Organization (full gov't funding)	53.4	51.41
Semi-Governmental Organization (partial gov't funding)	8.82	12.1
Private Sector	4.75	6.46
Other	3.01	2.94
Unemployed seeking a job	1.77	2.45
Retired	28.13	24.6
Q.4 Mothers' Years of Education (in years)	11.4	11.9
Mothers' Current Employment Status (%)***		
Governmental Organization (full gov't funding)	34.38	38.47
Semi-Governmental Organization (partial gov't funding)	2.61	1.63
Private Sector	2.06	2.02
Other	8.55	4.5
Housewife	33.4	36
Unemployed	2.75	4.22
Retired	16.25	13.5

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**Hypothesis I: Economic Entitlement (Table 3)**

Table 3 describes the survey questions related to Hypothesis I of students' perception of economic incentives. More than 70% of male and female students indicated a strong entitlement sentiment by agreeing with the following statement: "the government guarantees me a job."

There was an approximately 11% difference between male and female students' agreement with the statement, "Qataris are guaranteed a job upon graduation from high school," with boys more likely to agree than girls. This is consistent with the descriptions above, indicating that female students are more likely to aspire to greater educational attainment to obtain more socially prestigious jobs, such as those in the governmental sector. Male students, however, may perceive

a greater availability of job opportunities that do not require college completion, such as employment in the military and police sectors. Indeed, about 70% of male and female students agreed that “jobs are easy to get in the military and police sectors.”

Despite the entitlement sentiments described above, both boys and girls seemed to acknowledge that some challenges existed for Qataris seeking employment. Less than 30% of boys and girls agreed with the statement, “Not any Qatari who wants a job can get one.” Boys were slightly more likely than girls to agree that “finding a job in government sectors is difficult.” Yet boys were, by slightly more than 11%, more likely than girls to believe that “a government job (companies funded by the government) does not require a lot of effort from me”; boys were 13% more likely than girls to believe that “having a challenging task would not inspire me to work harder.” These responses may suggest that boys perceive some difficulty in getting a government job that meets their aspirations or that they may have to wait for a desired job to become available. However, despite these potential obstacles, boys may not be willing to exert much effort toward the challenging task of searching for a desirable job.

Interestingly, boys’ and girls’ perceptions of job security after obtaining employment were consistent. Approximately 40% of girls and 38% of boys agreed that “as a Qatari, it is not possible to lay me off from my job.” Approximately 55% of boys and 48.23% of girls believed there are no consequences for doing personal work during work hours. With respect to job security, girls seemed to rely on merit more for career advancement than boys: 38.66% of boys agreed with the statement “once I get a job, I will be automatically promoted, regardless of my performance at work,” though only 19.12% of girls agreed with this statement.

Table 3

*Hypothesis I: Questions: Students' Perceptions of Economic Entitlement*

<b>Q14</b>	<b>Boys %</b>	<b>Girls %</b>
1. The government guarantees me a job.***	76.25	71.67
2. If I wanted to start a business, there are no government programs to help fund my entrepreneurial project.***	48.33	30.18
3. Unemployment does not exist in my country among Qataris.	58.35	58.72
4. Not every Qatari who wants a job can get one.***	28.66	17.86
5. Jobs are easy to get in the military and police sectors.	72.34	69.63
6. Finding a job in governmental sectors is difficult.***	57.68	53.12
7. Qataris are guaranteed a job upon graduation from high school.***	60.14	49.14
8. The private sector is not required by the government to hire Qataris.***	48.49	42.4
<b>Q15</b>		
1. I will be entitled to many benefits along with a high salary in any job I get.**	75.13	78.72
2. My salary as a Qatari citizen should not be higher than that of non-Qataris doing the same job. ***	43.5	48.27
3. A government job does not require a lot of effort from me.***	38.51	27.41
4. Private-sector jobs do not enable me to learn more skills, compared to working in the governmental sector.***	43.81	31.36
5. I get frustrated when given a task that is difficult to conduct.	41.79	39.14
6. I believe that having a challenging task would not inspire me to work harder.***	39.04	25.62
7. Jobs that do not involve challenges/difficulties will be boring.***	59.51	65.42
8. A private-sector job is appealing to me because it demands a lot of effort.	42.00	40.81
9. I do not believe that obtaining education is an important step on the path to a successful career.***	38.35	22.73
10. The purpose of education is to prepare me for my career.	58.7	57.37
<b>Q16</b>		
1. As a Qatari, it is not possible to lay me off from my job.	37.66	40.12
2. Once I get a job, I will be automatically promoted regardless of my performance at work.***	38.66	19.12
3. There are no consequences for the following behaviors at work:		
a. Being absent***	26.35	19.8
b. Arriving late***	29.55	23.93
c. Leaving early	38.78	38.51
d. Taking a vacation when your effort is needed	59.12	59.8
e. Doing personal work during work hours***	55.93	48.23
4. There are no consequences for poor performance on the job at work:		
a. Not completing an assigned task***	29.63	18.11
b. Procrastinating***	27.03	15.89

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The percentages indicate the share of each gender that agrees or strongly agrees with the statement.

### **Hypothesis II: Social Networking and the Value of Education (Table 4)**

Table 4 describes the survey questions as they relate to Hypothesis II. In examining the value of education in a social context, there were some conflicting results. Overall, both boys and girls seemed to recognize the civic value of education. More than 80% of boys and girls indicated that what they learn in school will make them a better person in society. Moreover, only 20.16% of boys and 7.45% of girls indicated that academic achievement was not important for them as a Qatari person. However, almost half of boys (48.78%) and roughly one third of girls (33.75%) agreed that “mastering subjects taught at school is not essential for becoming an educated citizen.” It seems as if students evaluated the value of education along different dimensions. When asked directly about the value of testing, such as in the survey item “doing well on tests is important to me,” 88.45% of boys and 95.85% of girls agreed with this statement. However, approximately 50% of the boys in the sample agreed that learning the various aspects of manhood are more important than learning school subjects. In the previous statement about the value of testing, students might have perceived the importance of testing as necessary for completing graduation requirements, yet when considering education against the background of broader societal interactions—such as growing into a man in society—boys were less likely to value education.

Boys were more likely to perceive the existence of external influences. For example, 46.21% of boys and 36.40% of girls believed that “I cannot fully control my academic achievement.” Also, boys were more likely to recognize the existence of peer pressure than girls. More than 30% of boys but only 22% of girls agreed with the statement, “My classmates make

fun of me if I take my schoolwork seriously.” Moreover, boys were less likely to agree that their classroom behavior affected their learning: 34.34% of boys agreed that “misbehaving in class at school does not affect my learning” compared to 28.70% of girls.

In examining the attributes of getting a good job in Qatar, girls seemed to show more agreement overall, specifically 7% more, than boys with respect to the importance of academic achievement and the acquisition of skills, such as proficiency or fluency in English and setting and achieving ambitious goals. Boys, however, appeared to place greater emphasis on societal relationships; they were almost 10% more likely than girls to believe that family or personal connections are important attributes for getting a job. Consistent with their awareness of peers, boys were more likely to agree (by almost 6%) that being known as a hardworking person was an important attribute for getting a job.



Table 4

*Hypothesis II: Students' Perceptions of Social Networking and the Value of Education*

<b>Q17 (1-13)</b>	<b>Boys %</b>	<b>Girls %</b>
1. Academic achievement is not important for me as a Qatari person.***	20.16	7.45
2. Earning the respect of my peers and relatives is not related to my academic achievement.	55.38	53.36
3. My grades in school affect my status/role in the family.***	63.85	54.72
4. What I learn in school will make me a better person in the society.***	80.49	85.54
5. I cannot fully control my academic achievement.***	46.21	36.4
6. Doing well on tests is important to me.***	88.45	95.85
7. Who you know is not necessarily more important for getting high-salary jobs than having better skills and education.	58.8	61.55
8. My relatives and contacts will help me get a good job regardless of my academic performance.***	54.3	39.82
9. Mastering the taught subject at school is not essential for becoming an educated citizen.***	48.78	33.75
10. In the workplace, people with better connections are more likely to get promoted regardless of their work performance.***	61.1	55.15
11. Studying at school is less important than learning about various aspects of manhood.***	49.6	
12. Misbehaving in class at school does not affect my learning.***	34.34	28.7
13. My classmates make fun of me if I take my school work seriously.***	30.67	21.67
<b>Q18 Attributes of getting a good job in Qatar (1-6)</b>		
1. Getting an excellent education***	83.01	90.37
2. Family or personal connections***	64.36	53.18
3. Proficiency or fluency in English***	77.96	84.75
4. Being known as a hard working person***	75.36	69.02
5. Having well-rounded life experiences	78.21	77.07
6. Setting and achieving ambitious goals***	84.75	93.81

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The percentages indicate the share of each gender that agrees or strongly agrees with the statement.

### **Hypothesis III: Civic Engagement (Table 5)**

Table 5 describes the survey questions related to Hypothesis III. Civic engagement examined two major constructs: a bonding society and a bridging society. Overall, the data indicated that girls appear more open to the value of a bridging society in which people's differences and diversities are more greatly appreciated. For example, girls were approximately 2 times as likely as boys to state that they had non-Qatari friends with whom they socialize regularly and were less likely to agree that they do not feel they grow as a person when interacting with people who do not share their faith and values.

Boys seemed to place greater value on the bonding nature of society. Hence, there was a 27.15% difference—higher for boys—with respect to not expecting to interact with people from other countries during their careers. Consistent with this attitude, more than half of the boys in the sample believed that non-Qataris should not have the same privileges as Qataris, non-Qataris should not work in the governmental sector, and non-Qataris create an obstacle for Qataris to be promoted at work.

Table 5

*Hypothesis III: Students' Perceptions of Civic Engagement*

<b>Q26 (1-9)***</b>	<b>Boys %</b>	<b>Girls %</b>
1. I would not hesitate to help those in need in my country	87.66	95.93
2. Joining social or sports clubs (Barzan, Mawater) is very important for my future career.	52.75	40.28
3. I don't have any non-Qatari friends with whom I socialize on a regular basis (once a week or more).	47.9	27.92
4. Interacting with non-Qataris in my future work will create a work environment that encourages positive collegial competition.	73.32	79.14
5. I do not feel that I grow more as a person when I interact with people who don't share my faith.	51.04	31.39
6. I am unable to interact with people who don't share my values.	49.21	30.16
7. I value having friends from different parts of the world.	74.09	81.38
8. In my future career I would not expect to interact with people from other countries	40.65	13.5
9. It is my duty to maintain customs and traditions of my country	89.47	96.44
<b>Q27 (1-6)</b>		
1. I believe that non-Qataris should not have the same privileges as Qataris***	61.08	39.88
2. I believe that Qatar hosts a diverse population from all over the world***	87.11	97.49
3. Non-Qataris at work create an obstacle for me to be promoted***	53.99	35.82
4. I am comfortable with our country's openness to different cultures of the world***	75.85	86.95
5. I believe that non-Qataris should not work in the public (governmental) sector***	54.05	38.06
6. I believe that having non-Qataris working in government jobs is essential for the Qataris in order to develop the country further	65.95	64.07

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The percentages indicate the share of each gender that agrees or strongly agrees with the statement.

## Factor Discussion

The following discussion presents each factor with an eigenvalue greater than 1 and includes the questions that were loaded into the factor with loadings greater than .3, the predicted effect of the factor on student learning, and the reliability of the identified factor.

### **Hypothesis I (Abstract Perceptions of Economic Entitlement Factor)**

This factor describes students' *abstract perceptions of economic entitlement* in Qatari society. The questions associated with this factor ask students about their perceptions of the government's role in Qatari society, including the extent to which the government guarantees jobs for its citizens, the extent to which unemployment does not exist in Qatar, the extent to which jobs are easy to get in the military and police sectors, and the extent to which Qataris are guaranteed a job upon graduation from high school. These questions are abstract in the sense that they can be perceived as asking about society in general rather than about each individual student's perceptions of his or her specific sense of economic entitlement. I assume students' agreement with abstract notions of entitlement in Qatar will be negatively associated with their performance on national standardized tests. Cronbach's alpha for this factor is .50, suggesting moderate to low reliability.

### **Hypothesis I (Concrete Perceptions of Economic Entitlement Factor)**

This factor describes students' concrete personal perceptions of entitlements. That is, the questions included in this factor generally use first-person pronouns, and students are thus likely to interpret these questions as referring specifically to themselves rather than to a more abstract assessment of the nation as a whole. Students who believe that private-sector jobs—which require more skills—such as language and technology, are not appealing compared to government-sector jobs, students who get frustrated when given a difficult task, and students

who are not inspired to work harder on a challenging task will do poorly on national standardized tests. Cronbach's alpha is .51, suggesting that this factor has moderate to low reliability.

### **Hypothesis I (Accountability of Perceived Economic Entitlement)**

The questions that were loaded into this factor describe a different aspect of entitlement. Agreement with these statements suggests a *lack of accountability* in how Qatari high-school students perceive entitlements. Students who agree with these statements believe that, for example, there are no consequences for being absent from, arriving late to, and leaving early from work. They have a lack of accountability or a no-consequences attitude at work, believing they will be automatically promoted regardless of their poor performance, and that it is not possible to lay off a Qatari from his or her job. I expect that students who lack a strong sense of accountability—due to how strongly they believe in economic and cultural entitlements for Qataris—will perform worse on national standardized tests than those who do not. Cronbach's alpha is .74, suggesting strong reliability.

### **Hypothesis II (Job Skills)**

This factor describes the *job skills* needed for getting a good job in Qatar. Students who have high scores for this factor perceive that success in the labor market requires an excellent education, proficiency in English, reputation as a hardworking person, well-rounded life experiences, and the ability to set and achieve ambitious goals. Students who believe in the importance of these characteristics regarding their success in getting a good job should perform well on national exams. However, this factor is also positively correlated with belief in the importance of family or personal connections for getting a good job, a perception that should have a negative effect on students' achievement. Because the achievement implications for different aspects of this factor conflict with each other, I wonder if the factor as a whole will

have no impact on achievement. Cronbach's alpha is .72, suggesting that this is a reliable factor. In short, students who believe education is important to their success also believe family and personal connections are important.

### **Hypothesis II (Value of Education)**

In contrast the previous factor, this factor focuses almost exclusively on the perceived *value of education* to students. It includes perceptions of academic value, such as the value of doing well on tests, whether what students learn in school will make them a better person in Qatari society, and the value of education for getting a good job in Qatar, such as getting an excellent education and setting ambitious goals for finding work. It also taps into negatively framed sentiments, such as academic achievement not being important for Qatari students and misbehaving as not affecting one's learning. Students who place a high value on this factor agree with positively worded questions and disagree with negatively worded questions. I predict a positive relationship between this factor and students' academic achievements. Cronbach's alpha is .63, indicating reasonable reliability.

### **Hypothesis II (Social Connections, *Wasta*)**

The questions that load well on this factor describe the concept of *wasta* (social connection). The questions are as follows: Relatives and contacts are helpful for getting a good job, regardless of academic performance; mastering school subjects is not essential to becoming an educated citizen; people with better connections are more likely be promoted at work, regardless of performance; and family or personal connections are important to getting a good job in Qatar. I expect students who agree with these *wasta*-related questions not to care much about education; thus, I expect them to do poorly on national exams. Cronbach's alpha is .54, suggesting this factor is only moderately reliable.

### **Hypothesis III Civic Engagement (Bridging Society)**

This factor displays positively framed questions about the concept of civic engagement. This factor taps into the notion of a “bridging culture.” The questions included in this factor are the following: I would not hesitate to help those in need in my country, my interaction with non-Qataris will encourage positive collegial competition; I value friends from all over the world; and it is my duty to maintain customs and traditions in Qatar. I expect students who agree with these statements to do well in school. Cronbach’s alpha is .70, suggesting that it is reliable.

### **Hypothesis III Civic Engagement (Bonding Society)**

The questions that load well on this factor are all negatively framed about the concept of civic engagement. The questions look into the notion of a bonding society (i.e., a society in which people tend to have enclosed mindsets and are not accepting of others). The statements associated with the questions included in this factor are the following: “I joined social or sports clubs, such as Barzan and Mawater,” “I do not have non-Qatari friends with whom I socialize regularly,” “I do not feel that I grow as a person when interacting with people who do not share my faith,” “I am unable to interact with people who do not share my values,” and “in my future career, I would not expect to interact with people from other countries.” I expect students who agreed with these negatively framed statements will do poorly on their exams. The Cronbach’s alpha is 0.67, suggesting acceptable reliability.

## **Factor Regression Results**

### **Abstract Entitlement**

Table 6 displays the results of six regression models—two models for each dependent variable—for male students. The table indicates that male students’ perceptions of *abstract notions of entitlement* are positively correlated with Arabic scores. In Model I with Arabic

scores, the effect size without controlling for prior scores is 0.07 SD for male high school students ( $p < 0.05$ ). In Table 7, for female students, an SD increase in abstract entitlement is associated with a 0.07-SD increase in their Arabic scores ( $p < 0.05$ ). In the all-student model in Table 8, an SD increase in perceptions of abstract entitlement is associated with a 0.08-SD increase in Arabic scores without controlling for prior scores ( $p < 0.01$ ), and a 0.06-SD increase in academic growth after controlling for prior scores ( $p < 0.01$ ).

### **Concrete Entitlement**

In Table 6, male students' perceptions of concrete entitlement are negatively correlated across the math and Arabic subjects; the magnitude of the coefficient ranges in size from -0.1 to -0.06 SD. An SD increase in concrete notions of entitlement is associated with a -0.06-SD decrease in male students' learning. Similarly, for Arabic achievement, the magnitude of the effect in Model I is -0.1 ( $p < 0.01$ ); in Model II, the effect size is -0.07 SD ( $p < 0.05$ ). In Table 7, the girls-only regression model indicates a negative association between concrete entitlement and female students' achievement across Arabic and English subject models, and it is statistically significant in Arabic and English. For Arabic, an SD increase in female students' perceptions of concrete entitlement is associated with a 0.16-SD decrease in the first model ( $p < 0.01$ ), and the coefficient is -0.09 in the second model ( $p < 0.01$ ).

In English, a negative association exists between female students' perceptions of concrete entitlement and achievement. The coefficient is -0.11 SD without controlling for prior achievement ( $p < 0.01$ ) and -0.06 SD when controlling for prior achievement ( $p < 0.01$ ). The all-student models in Table 8 show that concrete entitlement is negatively associated with student achievement, and it is statistically significant across all models except for when controlling for prior scores in English. In the math portion of Model I of the all-student table, the coefficient for



concrete entitlement is  $-0.06$  SD ( $p < 0.01$ ). For the math portion of Model II, controlling for prior scores, an SD increase in all students' perceptions of concrete entitlement is associated with a  $-0.04$ -SD decrease ( $p < 0.05$ ). For the all-student Table 3, the Arabic subject results in Model I indicated that an SD increase in students' perceptions of concrete entitlement is associated with a  $-0.12$  SD decrease in achievement ( $p < 0.01$ ). Once we hold prior scores constant in Model II, the coefficient drops to  $-0.08$  SD ( $p < 0.01$ ). Last, in Model I with English as the dependent variable, the concrete entitlement coefficient is  $-0.08$  SD ( $p < 0.01$ ).

### **Lack of Accountability**

The third factor associated with the economic incentive hypothesis is the lack of accountability, and its coefficient has a negative sign across all three subjects. For the boys-only regressions in Table 6, an SD increase in students' perceptions of the lack of accountability is negatively associated with math, with a coefficient of  $-0.06$  SD in the first model and  $-0.07$  SD in Model II ( $p < 0.05$ ). In Table 7, however, for the girls-only regressions, the factor of the lack of accountability is associated with a  $-0.11$ -SD decrease in Arabic scores ( $p < 0.01$ ) in Model I and a  $-0.08$ -SD decrease in Model II ( $p < 0.01$ ). In Table 8, the all-student regression results show that the lack of accountability is negatively related to performance in math and Arabic. For example, an SD increase in this factor is associated with a  $-0.054$ -SD decrease in math achievement ( $p < 0.01$ ); similarly, the factor continues to be negative when controlling for prior scores with an effect size of  $-0.053$  SD ( $p < 0.01$ ). In Arabic, the lack of accountability is associated with an effect size of  $-0.08$  SD ( $p < 0.01$ ) without controlling for prior scores; the effect size is  $-0.06$  SD ( $p < 0.01$ ) after controlling for prior scores.

Table 6

*Hypothesis I: The Relationship between Perceptions of Entitlement and Accountability on Male High School Student Achievement in Qatar*

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.303*** (0.030)		0.282*** (0.029)		0.351*** (0.032)
Abstract Entitlement <sup>c</sup>	-0.011 (0.030)	-0.013 (0.028)	0.066** (0.030)	0.053* (0.028)	0.036 (0.029)	0.026 (0.027)
Concrete Entitlement <sup>c</sup>	-0.062** (0.029)	-0.054* (0.028)	-0.100*** (0.029)	-0.070** (0.028)	-0.042 (0.028)	-0.009 (0.027)
Lack of Accountability <sup>c</sup>	-0.063** (0.030)	-0.066** (0.029)	-0.053* (0.030)	-0.037 (0.028)	-0.004 (0.029)	-0.004 (0.027)
Constant	0.841 (0.787)	0.505 (0.756)	1.528* (0.784)	0.913 (0.752)	-0.323 (0.752)	-0.285 (0.704)
Observations	981	981	985	985	931	931
R-squared	0.055	0.149	0.137	0.219	0.064	0.183
Number of Schools	24	24	24	24	24	24

Each of these regressions also includes all student and parent characteristics as control variables.  
\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

Table 7

*Hypothesis I: The Relationship between Perceptions of Entitlement and Accountability on Female High School Student Achievement in Qatar*

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.465*** (0.029)		0.452*** (0.028)		0.604*** (0.025)
Abstract Entitlement <sup>c</sup>	0.025 (0.030)	0.013 (0.026)	0.070** (0.027)	0.040* (0.024)	0.015 (0.028)	0.007 (0.022)
Concrete Entitlement <sup>c</sup>	-0.043 (0.032)	-0.002 (0.029)	-0.156*** (0.029)	-0.093*** (0.026)	-0.113*** (0.031)	-0.063*** (0.024)
Lack of Accountability <sup>c</sup>	-0.040 (0.030)	-0.031 (0.027)	-0.108*** (0.027)	-0.079*** (0.024)	-0.019 (0.028)	0.010 (0.022)
Constant	1.881* (0.987)	1.718* (0.878)	0.755 (0.904)	0.531 (0.802)	1.033 (0.940)	0.307 (0.738)
Observations	1,010	1,010	1,013	1,013	1,013	1,013
R-squared	0.105	0.296	0.180	0.358	0.161	0.485
Number of Schools	19	19	19	19	19	19

Each of these regressions also includes all student and parent characteristics as control variables.  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test scores for 2014 and 2013 mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

Table 8

*Hypothesis I: The Relationship between Perceptions of Entitlement and Accountability on All Students High School Student Achievement in Qatar*

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.374*** (0.021)		0.350*** (0.020)		0.486*** (0.020)
Abstract Entitlement <sup>c</sup>	0.013 (0.021)	0.0027 (0.019)	0.080*** (0.020)	0.060*** (0.019)	0.030 (0.020)	0.022 (0.017)
Concrete Entitlement <sup>c</sup>	-0.056*** (0.021)	-0.040** (0.020)	-0.120*** (0.021)	-0.078*** (0.020)	-0.076*** (0.021)	-0.033* (0.018)
Lack of Accountability <sup>c</sup>	-0.054*** (0.021)	-0.053*** (0.019)	-0.080*** (0.020)	-0.059*** (0.019)	-0.011 (0.020)	-0.003 (0.017)
Constant	1.451*** (0.545)	1.170** (0.507)	0.920* (0.530)	0.298 (0.496)	0.974* (0.523)	0.397 (0.455)
Observations	1,991	1,991	1,998	1,998	1,944	1,944
R-squared	0.061	0.200	0.110	0.230	0.089	0.315
Number of Schools	43	43	43	43	43	43

Each of these regressions also includes all student and parent characteristics as control variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

### Value of Education and Doing Well on Tests

The social networking factor analysis yields some interesting findings as can be seen in tables 9, 10, and 11. In the boys' factor results in Table 9, a positive relationship exists between male student academic achievement and the value of education and doing well in school. The results are only statistically significant in both models of the Arabic subject. In Model I of the Arabic subject, a unit increase in boys' perception of education value is associated with a 0.13

increase in their academic achievement ( $p < 0.01$ ). In Model II, after controlling for prior Arabic scores, this figure minutely decreases to 0.11 ( $p < 0.01$ ).

In Table 10, girls' results, similar to those of boys, indicate a positive association between education value and doing well on tests and their academic performance on national standardized testing. The relationship is statistically significant in both the Arabic and English subjects. In Model I in the Arabic subject, a unit increase in female students' perceptions of education value is associated with a 0.13 increase in their academic achievement ( $p < 0.01$ ). After controlling for prior scores, the coefficient drops in size to 0.1 ( $p < 0.01$ ). The coefficients are much smaller in the English subjects, suggesting a weaker association between girls' perceptions of education value and their English test achievement. In Model I, a unit increase with girls' perceptions of education value is associated with a 0.06 increase in their academic achievement ( $p < 0.05$ ). After controlling for the English subject prior scores, the coefficient is 0.06 ( $p < 0.05$ ).

In Table 11, the education value in the all-student model is positively associated with students' academic achievements. The relationship is significant in both models of the Arabic subject with coefficient sizes of 0.14 and 0.11, respectively, and  $p < 0.01$ . Strangely, English Model I and Model II coefficients are the same size: 0.04; however it is only statistically significant in the second model after controlling for prior score.

### ***Wasta***

The *wasta* factor in Table 9, on the other hand, suggests a negative relationship between male students' academic achievement and their perceptions of *wasta*. Again, this relationship is only significant in the Arabic subject. In Model II, the coefficient is -0.074 SD ( $p < 0.05$ ), and it is -0.065 SD in Model I ( $p < 0.05$ ). Surprisingly, in Table 10, female students' academic

achievement is positively correlated with their perceptions of the value of *wasta* in the English subject in Model I, with a small coefficient 0.064 SD ( $p < 0.05$ ). In Model I with Arabic as the dependent variable, an SD increase in the factor is associated with a negative 0.063 SD decrease in achievement ( $p < 0.05$ ). In Table 11, the effect of *wasta* disappears after running the analysis on all students.

Table 9

*Hypothesis II: The Relationship between Perceptions of Social Networking and Value of Education and Male Student Scores*

	<b>Math Score<sup>a</sup></b>		<b>Arabic Score<sup>a</sup></b>		<b>English Score<sup>a</sup></b>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.306*** (0.031)		0.283*** (0.029)		0.354*** (0.031)
Value of Education and doing well <sup>c</sup>	0.043 (0.031)	0.048 (0.030)	0.132*** (0.031)	0.110*** (0.029)	0.019 (0.030)	0.016 (0.028)
Wasta <sup>c</sup>	-0.019 (0.032)	-0.024 (0.030)	-0.0736** (0.031)	-0.0651** (0.030)	0.020 (0.030)	0.036 (0.028)
Job Skills <sup>c</sup>	0.001 (0.029)	-0.012 (0.027)	0.043 (0.028)	0.024 (0.027)	0.015 (0.027)	0.009 (0.026)
Constant	0.793 (0.792)	0.446 (0.761)	1.645** (0.783)	1.008 (0.750)	-0.324 (0.754)	-0.263 (0.704)
Observations	981	981	985	985	931	931
R-squared	0.047	0.142	0.142	0.225	0.062	0.185
Number of Schools	24	24	24	24	24	24

Each of these regressions also includes all student and parent characteristics as control variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

Table 10

*Hypothesis II: The Relationship between Perceptions of Social Networking and Value of Education and Female Student Scores*

	<b>Math Score<sup>a</sup></b>		<b>Arabic Score<sup>a</sup></b>		<b>English Score<sup>a</sup></b>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.466*** (0.029)		0.473*** (0.028)		0.608*** (0.025)
Value of Education and doing well <sup>c</sup>	0.007 (0.034)	0.003 (0.030)	0.134*** (0.031)	0.0996*** (0.028)	0.0653** (0.032)	0.0595** (0.025)
Wasta <sup>c</sup>	0.023 (0.031)	0.005 (0.027)	0.017 (0.029)	0.015 (0.025)	0.0640** (0.029)	0.021 (0.023)
Job Skills <sup>c</sup>	-0.017 (0.033)	-0.006 (0.029)	0.003 (0.031)	0.002 (0.027)	-0.006 (0.031)	0.006 (0.025)
Constant	2.206* (1.298)	1.809 (1.153)	-0.285 (1.077)	-0.116 (0.943)	1.922 (1.238)	0.936 (0.970)
Observations	1,011	1,011	1,015	1,015	1,014	1,014
R-squared	0.102	0.295	0.151	0.351	0.157	0.485
Number of Schools	19	19	19	19	19	19

Each of these regressions also includes all student and parent characteristics as control variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

Table 11

*Hypothesis II: The Relationship between Perceptions of Social Networking and the Value of Education and All Student Scores*

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.377*** (0.021)		0.360*** (0.020)		0.490*** (0.020)
Value of Education and doing well <sup>c</sup>	0.030 (0.022)	0.0305 (0.021)	0.136*** (0.022)	0.108*** (0.020)	0.0379* (0.022)	0.0379** (0.019)
Wasta <sup>c</sup>	0.00185 (0.022)	-0.0117 (0.020)	-0.0219 (0.021)	-0.0178 (0.020)	0.0395* (0.021)	0.0288 (0.018)
Job Skills <sup>c</sup>	-0.00686 (0.021)	-0.0148 (0.020)	0.0302 (0.021)	0.0167 (0.019)	0.00658 (0.020)	0.00887 (0.018)
Constant	1.444*** (0.551)	1.150** (0.511)	1.113** (0.537)	0.418 (0.500)	1.007* (0.527)	0.445 (0.457)
Observations	1,991	1,991	1,998	1,998	1,944	1,944
R-squared	0.055	0.195	0.098	0.227	0.085	0.316
Number of Schools	43	43	43	43	43	43

Each of these regressions also includes all student and parent characteristics as control variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

### **Bonding and Bridging Societies**

As shown in Table 12, the factor of a bonding society appears not to add significant value in explaining boys' underachievement. Even though there is a negative association, its effect size is not significantly different from 0, suggesting that no correlation exists between belief in a



bonding society and boys' academic achievement. In Model I of the Arabic subject, an SD increase in the factor is associated with a negative 0.063 SD in achievement ( $p < 0.05$ ).

On the other hand, the trend for a bridging society indicates a positive association between males' academic achievements and students' attitudes toward a bridging society. In Arabic, both Models I and II suggest that attitudes toward a bridging society are associated with higher levels of male students' academic achievement. For Model I, the coefficient is 0.13 SD ( $p < 0.01$ ), and for Model II, the coefficient is 0.1 SD ( $p < 0.01$ ). Finally, in English in Model I, a positive association can be found between male students' attitudes toward a bridging society and their achievement with an effect size of 0.06 SD ( $p < 0.05$ ).

Interestingly, as shown in Table 13, there seems to be a greater effect of girls' perceptions of a bonding society on their academic achievement. In Model I for the Arabic subject, a one-unit change in support of the concept of bonding is associated with a -0.012-SD decrease in female students' academic achievement ( $p < 0.01$ ). In Model II for the Arabic subject, the magnitude of the effect decreases to -0.07 SD ( $p < 0.05$ ). Moreover, a unit increase in female students' support of a bonding society is associated with -0.11 SD ( $p < 0.01$ ). Girls' achievement appears to be generally less affected by their perceptions of a bridging society compared to boys in the Arabic subject, but boys are less affected by their perceptions of a bridging society in the English subject. In Arabic Model I, the effect of female students' perceptions of a bridging society and their academic achievement is 0.19 SD ( $p < 0.01$ ). Similarly, in Model I for the English subject, a unit increase in girls' and boys' support of their perceptions of a bridging society is positively associated with their academic achievement with an effect size of 0.1 SD and 0.06 SD, respectively ( $p < 0.01$ ).

The regression analyses for all students in Table 14 analyses follow the same pattern as that of the girls' and boys' models, in which the student perception of a bonding society is negatively associated with academic achievement, and where bridging society is positively associated with achievement. In math Model I, the effect size is -0.045 SD ( $p < 0.05$ ). Arabic Model I and Model II suggest a negative association between support for a bonding society and achievement with coefficients of -0.09 SD ( $p < 0.01$ ) and -0.06 SD ( $p < 0.01$ ), respectively. In English Model I, perceptions of bonding society are negatively associated with achievement with a coefficient of -0.05 SD ( $p < 0.05$ ).

By contrast, in Table 14, students' perceptions of a bridging society indicate a positive association between their support of a bridging society and academic achievement in the Arabic and English subjects. In Arabic Model I, an SD increase in students' perceptions of a bridging society is associated with 0.15 SD ( $p < 0.01$ ), whereas in Arabic Model II, the coefficient describing the relationship between students' perceptions of a bridging society and their academic achievement is 0.1 SD ( $p < 0.01$ ). The results for English indicate a smaller effect size in both models: 0.08 SD and 0.06 SD ( $p < 0.01$ ).

Table 12

*Hypothesis III: The Relationship between Civic Engagement and Male Student Scores*

	<b>Math Score<sup>a</sup></b>		<b>Arabic Score<sup>a</sup></b>		<b>English Score<sup>a</sup></b>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.305*** (0.031)		0.283*** (0.029)		0.351*** (0.031)
Bonding Society <sup>c</sup>	-0.0322 (0.030)	-0.033 (0.028)	-0.0629** (0.029)	-0.0503* (0.028)	-0.010 (0.029)	-0.004 (0.027)
Bridging Society <sup>c</sup>	-0.011 (0.028)	-0.0176 (0.026)	0.130*** (0.027)	0.102*** (0.026)	0.0565** (0.027)	0.0474* (0.025)
Constant	0.727 (0.791)	0.39 (0.760)	1.697** (0.784)	1.047 (0.751)	-0.245 (0.752)	-0.186 (0.704)
Observations	981	981	985	985	931	931
R-squared	0.046	0.141	0.139	0.222	0.065	0.186
Number of Schools	24	24	24	24	24	24

Each of these regressions also includes all student and parent characteristics as control variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

Table 13

*Hypothesis III: The Relationship between Civic Engagement and Female Student Scores*

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.465*** (0.029)		0.465*** (0.028)		0.603*** (0.025)
Bonding Society <sup>c</sup>	-0.0639* (0.037)	-0.0141 (0.033)	-0.115*** (0.034)	-0.0670** (0.030)	-0.106*** (0.035)	-0.031 (0.028)
Bridging Society <sup>c</sup>	-0.0244 (0.037)	-0.0182 (0.033)	0.128*** (0.034)	0.0435 (0.031)	0.0978*** (0.035)	0.0492* (0.028)
Constant	1.880* (0.986)	1.666* (0.877)	0.724 (0.916)	0.464 (0.809)	1.181 (0.937)	0.401 (0.738)
Observations	1,010	1,010	1,013	1,013	1,013	1,013
R-squared	0.104	0.295	0.156	0.345	0.164	0.484
Number of Schools	19	19	19	19	19	19

Each of these regressions also includes all student and parent characteristics as control variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

Table 14

*Hypothesis III: The Relationship between Civic Engagement and All Student Scores*

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.376*** (0.021)		0.354*** (0.020)		0.486*** (0.020)
Bonding Society <sup>c</sup>	-0.045** (0.023)	-0.034 (0.021)	-0.086*** (0.022)	-0.060*** (0.021)	-0.055** (0.022)	-0.028 (0.019)
Bridging Society <sup>c</sup>	-0.00545 (0.022)	-0.0144 (0.020)	0.146*** (0.021)	0.0989*** (0.020)	0.0853*** (0.021)	0.0582*** (0.018)
Constant	1.410** (0.548)	1.122** (0.508)	1.049** (0.532)	0.362 (0.498)	1.078** (0.523)	0.469 (0.454)
Observations	1,991	1,991	1,998	1,998	1,944	1,944
R-squared	0.056	0.196	0.104	0.226	0.091	0.318
Number of Schools	43	43	43	43	43	43

Each of these regressions also includes all student and parent characteristics as control variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1

<sup>b</sup> Standardized test scores for 2014 and 2013 have mean 0 and SD 1

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores

## Limitations

### Internal Validity

**Survey question interpretation.** As with all surveys, researchers have to be cautious about the extent to which responses reflect students' actual beliefs. Understanding economic policies and social interaction is not easy, especially given that my correspondents are high school students. Some of the questions about policies almost seem to be factual (as if there is a right and wrong), meaning that knowledge of certain policies may affect responses in an unanticipated ways. Students might be providing what they think is the "correct answer." For example, students might strongly agree that the Qatarization policy guarantees certain jobs or

that the government provides other incentives, without actually believing that these policies personally benefit them. A student might believe that jobs are indeed guaranteed by the government, but perhaps the student would like a particular job that is not guaranteed by the government. As with any survey, we do not know what is motivating the response, whether it is based on factual understanding or based on social, economic, or political opinions.

The concrete-versus-abstract factor suggests that without first-person pronouns in the questions, students agree that this is how Qatar works in general. However, when the questions are worded so that they speak directly to them, students may respond with their individual opinions about how they think policies affect them personally. With the abstract factor, students may be answering as a country as a whole in a factual sense. When it comes to the concrete factor, we observe the real impact of students' perceptions of this type of entitlement.

Another possible limitation is that some questions asked students about their perceptions of their behaviors at work. Because the students had not been in the workplace, they had to generalize their perceptions based on their socializer beliefs. In other words, their perceptions would be influenced by their broader social networks. In addition, from my field notes, I have encountered difficulties with students' understanding the differences between the private and public sectors. Moreover, some students did not know their parents' specific job sectors.

**Impact of measuring perceptions of students after collecting their achievement scores.** Due to policy changes regarding the national standardized test, student achievement scores are available only for the years of 2013–2015. This is a problem because I have measured students' perceptions (the independent variables) after collecting their academic achievement scores (the dependent variables). As such, the results of this study cannot be interpreted causally. The issue here is that it is hard to determine in which direction the causal arrow is pointing. Do

students' perceptions affect their scores, or do students' academic scores shape their perceptions? Many studies argue that human perceptions are stable and fixed in the long run, and they are less likely to change in the short run unless they have encountered exogenous or endogenous changes. In practical policy terms, causality is a goal that policymakers favor but that is rarely achieved, as policies often deviate significantly from underlying research, if there is any research at all. Using a growth model explains further how student achievement adds more evidence in support of the findings. That is, when a finding is consistent across all models and model specifications, it is arguably more robust than when it is true in just one model.

**Measuring social constructs is difficult.** Another challenge is that this study focuses on difficult-to-measure constructs. I cannot be certain that the survey questions effectively tap into the underlying constructs or that students understand and respond to the questions honestly. However, it should be clear in this proposal that I have gone to great lengths to address this challenge. Face validity examines researchers' intended results of validity survey measurements. Relevant questions include the following: "Do your questions ask what you intend to ask?" "Do the results match your expectations?" In my survey, I used both positive and negative statements to capture more truthful responses.

### **External Validity**

The results of this study apply only to independent high school students in Qatar in 2016. The percentage of Qatari students in public high schools is higher than the percentage of Qatari students in the private schools. The government has put in place more incentives to encourage Qatari families to apply to private school. For example, new policies grant Qatari families vouchers to enter private schools.

Non-response, missing responses, or inaccurate responses, such as the duplication of the unique national ID number or the wrong entry of the national ID number, could be a threat to generalizability. Missing responses lead to the assumption that students who did not respond have the same opinions as those who responded and that their perceptions have the same correlation with their achievement on the national standardized test. However, very few students refused to take the survey, and a couple of schools refused to respond. This was addressed via weightings as has been mentioned in the method section. Eighty-four percent of the whole sample of 2,376—1,251 (one: male) and 1,125 (two: female)—responded, and very few students were dropped.

Moreover, factors have varying Cronbach-alpha levels, a measure of reliability, with some factors having a higher likelihood of being replicated if the study were repeated with a different sample. The lower the value of Cronbach's alpha, the less certain we are that the factor will be present in the population. Low levels of reliability suggest that we have less confidence that the factors would exist in the population, meaning that these factors might be unique to this survey and may not exist in the population.



## DISCUSSION AND IMPLICATIONS FOR FUTURE ACTION

This chapter begins with a discussion of the key findings for each hypothesis. These important findings can be summarized into the following three major points: (1) The achievement growth model highlights the “epidemic” impact of academic underachievement; (2) students’ perceptions of economic entitlements are associated with their academic performance; (3) Qatari students value education, yet Qatari boys’ perception of *wasta* is negatively associated with their academic performance; and (4) a bridging mindset is positively associated with academic achievement. I then discuss how these findings tie into the social contract and social capital theories discussed in the *Literature Review*. Finally, I conclude with recommendations for further research on this topic.

### **Four Key Findings**

**Growth models shed light on the persistence of perception.** The prior scores in the descriptive results indicate that over time, Qatari boys’ growth in math, Arabic, and English test scores decrease over time, whereas girls’ growth scores in the subjects of math and English increase over time. These results may imply that the signals of the social and economic structures with regard to real-life opportunities become more real for Qatari boys as they get older. Specifically, it may become more evident to boys that doing well in school is not a requirement for future success; consequently, they invest in alternatives rather than applying themselves to critical academic subjects that require more effort.

**Consistency across models indicates robust findings.** The use of two models, the achievement model and the achievement growth model, has allowed greater insight into the consistency of the findings. Usually, once a relationship is statistically significant, it is

significant in both models (i.e., the achievement model and achievement growth model). Such a pattern suggests the robustness of the results. When contemplating the changes that adolescents face, it is reasonable to anticipate that older teens may challenge the status quo and alter their perceptions as a result. Yet the general trend in the data suggests a long-term impact of social, economic, and civic interactions on students' perceptions.

What is demonstrated by the growth model of students' overall academic achievement is that a change in test scores after controlling for prior scores reveals not only the impact of factors operating during those two years but also the consistency of the accumulation of forces of socialization over time. These forces include the influence of parents, peers, and the environment on students since birth.

Perceptions are generated early in a student's life, and the results revealed by the use of the growth model reinforce the power of perceptions on achievement over time. The results indicate that there is no deviation from or adolescent resistance to parental norms and traditional influences. It may be that this lack of opposition to established norms is limited to the academic context, and it is possible that Qatari youth are more rebellious in social contexts. It may also be a characteristic of Qatari culture. Perhaps it is typical for youth in more individualistic societies to exhibit more resistance to the status quo and parental values than it is for members of a collective society to do so.

**Perception of economic entitlements explains variation in academic performance: the big picture was similar for boys and girls.** The first hypothesis concerns the relationship between economic incentives and academic performance. The data support my hypothesis that the perceptions of entitlement are associated with academic performance. As displayed in tables 6, 7, and 8, and consistent with this hypothesis, there is a significant negative relationship

between economic incentives and academic performance for both genders. The findings suggests that both male and female students are aware of the economic entitlements available to them upon entering the job market—guaranteed jobs in the public sector irrespective of academic performance, higher salaries in the public sector compared to the private sector, and transfer payments to citizens to facilitate their housing needs and family growth. Students’ internationalization of these entitlements appear to be associated with students’ diverting efforts away from studying and improving their grades toward other pursuits.

*A possible ‘silver lining’: abstract vs. concrete entitlements.* Contrary to the unidirectional relationship anticipated in the hypothesis, a surprising finding was that economic signals showed a positive as well as a negative association with academic performance. When students view economic entitlements abstractly (e.g., when they express agreement with statements describing elements of Qatari entitlement policies, such as “The government guarantees me a job”), their perceptions are associated with higher academic scores, especially in the subject of Arabic. Conversely, students’ agreement with statements that indicate they perceive that hard work is not necessary for obtaining economic benefits has lower scores compared with those who do not believe this.

The existence of different associations between perceptions of certain types of entitlement and the test scores of Qatari students suggests that students could maintain competing attitudes toward education. Mickelson (1990) in her analysis of students’ valuation of education argued the following:

Abstract attitudes reflect the societal consensus about the ideal role of education as a bridge to adult roles; [whereas] concrete attitudes exist because on another level there is

social conflict over the value of education for people from minority and working-class backgrounds. (p. 58)

Applying this reasoning to Qatar, abstract entitlement corresponds to the presence of economic guarantees in Qatar's social contract as a safety net and to the sense that the citizenry belong to a nation. Concrete entitlements are indicative of the negative consequences of students' perceptions reflected in their academic behavior—an unwillingness to exert effort, frustration with coursework, and the avoidance of challenging school tasks. Concrete entitlement attitudes are also reflected in Qatari students' embrace of public sector employment and the avoidance of private sector employment, which is often more intellectually demanding but less prestigious and leading to less remuneration.

***Subjects matter to girls and boys in different ways: English, Arabic, and math.***

Although the positive and negative associations of abstract and concrete entitlements, respectively, are similar for both girls and boys. Boys are more likely to express stronger opinions about economic entitlements than are girls. With respect to the three subjects analyzed—math, Arabic, and English—although abstract entitlement was positively associated with academic achievement for both boys and girls in Arabic, the association for concrete entitlement differed by gender. The results indicate that the association of concrete economic entitlements was negative with respect to boys' achievement in the more technical subject, math, whereas for girls, the association was negative in the language and literature subjects, English and Arabic. The difference is not only interesting but also important because math is a subject that requires higher levels of intellectual effort and critical thinking, and excellence in this subject is necessary for work in the research and technology industries.

Overall, the results for Arabic subject scores throughout the study suggest that students' perceptions have a larger impact on their performance in Arabic compared to their performance in math or English. A possible explanation is that Arabic is perceived to be a less demanding subject; hence, students might not believe they need to expend significant effort to learn it. Moreover, Qatar's education and economic policies do not encourage students to learn the classical Arabic being taught in schools.

Another area in which boys and girls have responded differently is with respect to personal accountability in the workplace. Boys' perception that personal accountability is not required by the labor market, expressed by agreement with such statements as "once I get a job, I will be automatically promoted up the ladder regardless of my performance at work," is negatively associated with their academic performance in math. Conversely, the perception of the lack of accountability by female students is more robustly associated with females' Arabic test scores.

Ultimately, the data reveal a clear picture: A relationship exists between Qatari high school students' perceptions of economic entitlements and their academic performance. However, the impact of this perception is more robust for boys in math than it is for girls in the literature subjects.

**Qatari students value both education and social networks. *Students value education.*** The second hypothesis of the relationship between social networking and academic performance reveals the association between students' perception of the value of education and the value of social networks and their academic performance. Based on their agreement with statements such as "what I learn in school will make me a better person," or their disagreement with statements such as "academic achievement is not important," both Qatari male and female public high

school students have indicated that they value education. These expressions of value are similar to those identified by Mickelson as “abstract values of education.” Moreover, as agreement with these abstract values increases, the results suggest that students do better on national standardized tests.

***Student perception of *wasta* varies by gender.*** Nevertheless, despite the indication that they value education, students also perceived that social networks were a means of achieving rewards without having to invest in academic improvement. Here, it is also important to note that there was a sharp distinction between the effect of *wasta* for boys and girls.

First, on average, boys’ responses reflect more robust association with *wasta* than do girls’, implying that boys suffer greater harm from their perceptions concerning *wasta* than do girls. Boys’ agreement with statements such as “my relatives and contacts will help me to get a good job regardless of my academic effort” are negatively associated with boys’ academic performance in Arabic. This may be an indication that learning classical Arabic is not relevant to obtaining rewards in the labor market. Instead, “who you know” is more important.

Second, there is an unanticipated positive association between girls’ perception of *wasta* and their test scores in English. Although most girls do not strongly support *wasta*, this finding has interesting implications. Because English is the language frequently used in the private sector, as and fluency may be required for competitive jobs, this positive association may suggest that girls see social networking as a means of accessing employment opportunities. In this sense, social connections may complement girls’ learning and generate favorable gains.

As discussed in earlier chapters, education and employment for Qatari females may be a means of breaking away from the traditional patriarchal structure by facilitating greater social and economic opportunities and increasing their recognition in society. This positive outcome

stands in contrast to the negative association between *wasta* and academic achievement for boys. Boys' interests include establishing households, being the breadwinners, and advancing themselves both socially and economically. They perceive *wasta* as a valuable path to achieving success but view education as a more daunting and time-consuming path that does not necessarily lead to success.

***Conflict between values and perception create skewed opportunity structure.*** This thesis sheds light on the important struggles that Qatar is facing in its effort to develop knowledge-based skills in its youth through an investment in education. It is apparent that the entitlement system creates an opportunity structure that fosters negative attitudes toward learning and educational success in students, even though abstractly, they perceive education to be valuable. Qatar's labor market policies strongly contribute to students' perception that education is not the key to success.

This conflict between student perception and labor market realities shares a striking parallel to the African-American dilemma in the United States as explained by both Ogbu and Mikeslon. African Americans who recognize the abstract value of education are bounded by the reality that earning academic credentials does not offer them the same opportunities in the labor market as those available to the majority culture. Similarly, Qatari students' abstract value of education is bounded by the knowledge that they are able to participate in the labor market and attain success despite their academic credentials. Although the economic realities of Qataris exist in stark contrast to those of disadvantaged African-American students, students who value education in both groups face an uphill battle, working against societal forces to aspire to academic excellence. Qatari students who strive to succeed academically are battling the collective identity of an entitlement structure, whereas disadvantaged African-American students

work against an individualist identity and a system of institutional bias. The Qatari students face constraints in the school environment as a result of peer pressure discouraging their attempts to excel academically, and later in the labor market, they are constrained by a demotivating environment where employees and managers are unwilling to work toward professional excellence.

**Qatari students benefit from an open Mindset. *Closed mindset is bad for academic achievement.*** The third hypothesis concerns the relationship between Qatari high school students' perceptions of civic engagement and their performance on academic exams. Consistent with my expectation, students expressing strong agreement with the more inclusive bridging statements, such as "I value having friends from different parts of the world," have performed better on academic tests compared with students with a stronger inclination toward a bonding mindset. The more closed and exclusive nature of the bonding mindset is illustrated by agreement with statements such as "I am unable to interact with people who don't share my values."

**Qatari boys and Qatari girls perceive society differently.** Surprisingly, the results indicate that Qatari females in public high schools are more likely to have a bonding mindset compared to their male counterparts. Perhaps this is an indication that girls tend to adhere more to traditional norms. Understanding this finding requires further investigation because the nature of female socialization in Qatar has changed significantly over time. In the past, Qatari females had limited opportunities for public socialization, and their primary means of socialization was within either familial or small community environments. However, as Qatar has become more enmeshed within the global society, Qatari females are more integrated in many aspects of social life and have various public venues in which to socialize. The new Qatari reality is very much connected



with the globalized world, through news media, social media, and the heavy presence of expatriates working the country.

*Learning languages are associated with open and closed mindsets.* Student scores in Arabic are significant for both a bonding society mindset and a bridging society mindset. Interestingly, the findings for the bridging society mindset are largest and most significant in the subject of Arabic for Male Qatari high school students. However, for female students, the bridging society perception results are significant in the subject of English. As mentioned with respect to the findings on *wasta*, the association may be explained by the fact that proficiency in English enables Qatari females to network and more easily integrate in the larger society.

### **Implications for Policy-making: Practical Application of the Theoretical Approaches**

Each of these four major findings has practical implications for policymakers who are attempting to increase the human capital of Qatari youth. In the following paragraphs, I outline the implications of the findings above within the context of the social contract and social capital theories.

**Qatar must tweak the social contract.** The findings suggest that the awareness of the availability of economic entitlements in the labor market contribute to a lack of motivation on the part of Qatari high school students to increase their own human capital skills through an investment in education. As explained earlier, the presence of these entitlements and the corresponding attitudes toward working are relatively new to the Qatari culture and do not predate modern Qatar. Hard work, persistence, and patience are not foreign, nor are they unfamiliar values to Qataris. Instead, as Ramady explained, “There is evidence that people in this region have been motivated in the past, and are motivated in the present, but that the systems in

place may constrain change and reinforce reliance on government” (Ramady, 2015, p. 231). The apparent lack of motivation in present-day students and workers alike is likely a product of the rentier state.

Indeed, the modernity values of hard work and accountability are compatible with Islamic principles that emphasize the importance of the individual quest for knowledge. The notion of accountability is captured in the verse that states, “Verily, God will not change the condition of men, until they change what is in themselves” (Quran 13:11; Iqbal, 1934, p. 12). In his treatise on Islam and religious thought, Dr. Muhammed (1934) explained that Islam requires its believers to take initiative to advance their knowledge.

If he does not take the initiative, if he does not evolve the inner richness of his being, if he ceases to feel the inward push of advancing life, then the spirit within him hardens into stone and he is reduced to the level of dead matter. But his life and the onward march of his spirit depend on the establishment of connections with the reality that confronts him. It is knowledge that establishes these connections, and knowledge is sense-perception elaborated by understanding. (Iqbal, 1934, p. 12)

***Change will not happen immediately.*** The findings support the idea that perceptions are embedded and reinforced in Qatari youth and seem fairly resistant to change. This persistence is understandable considering that the Qatari mentality has not changed even with continued attempts to modernize and reform vital sectors of the economy, such as health and education.<sup>1</sup>

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<sup>1</sup> The implementation of a “voucher system” is an example of how reforms designed to increase accountability and competition into education eventually became a form of entitlement. As part

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of larger education reforms, Qatar piloted a voucher system, which provided subsidies for Qataris to attend private school. The program had several goals: (1) to promote accreditation and school quality because the program would require a standard metric for comparing quality across schools, (2) to encourage competition among private schools, (3) to facilitate parental choice by allowing parents to choose between private or public education, and, to a lesser extent, (4) to increase student exposure to a more diverse population in terms of gender and nationality. The program was originally designed to enable students with fewer financial resources, such as those with parents who were retired or parents who worked in the private sector, to gain admission to the private school system. It was expected that students would benefit from the higher educational standards thought to exist in public schools. The voucher program initially began with a small number of private schools that had established reputations for quality, as well as a few “independent” schools. (Independent schools were public schools between 2010 and 2016.) However, problems quickly arose, as parents who worked in the public sector complained about their exclusion from the program. To solve this problem, a committee in the ministry of education (MoE) recommended full expansion to all Qatari families and increased the number of eligible private schools to meet the increasing demand. To accommodate this increase, the MoE also authorized a new system of local accreditation. The result was that all Qatari students were eligible, local accreditation was as acceptable as international accreditation, and ministries were responsible for funding the voucher payments of their employees’ families. However, the decentralization eventually proved unsuccessful, and the MoE had created a centralized process for taking over payments. As independent schools returned to the traditional private school

As Bourdieu (1984) explained in his *social critique of the judgment of taste*, perceptions are reinforced by the social structures and institutions that exist in society so that an individual's preferences are no longer solely attributable to psychology. Simply presenting Qataris with alternatives—options to invest or not invest in education—will not encourage a rational choice of an investment in human capital. Although the individual Qatari's reality has changed to some extent by a reduction in elements of their safety net or as a result of rising unemployment and a demand for greater human capital acquisition, little to no corresponding change is seen in the perception of Qataris. Without highly visible, long-term, and consistent structural changes, there will continue to be a disconnect between the desires of policymakers to move toward modernity and economic sustainability and the motivations of Qataris.

**Qatar can benefit from increases to social capital.** The results of this study shed light on two prominent aspects of social capital: the value of social networks and the value of interaction with groups outside one's networks. The results also support the literature in finding that each of these aspects of social capital have positive and negative attributes.

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system, public schools no longer accepted vouchers, so the program reverted to a central administration. The private school system now suffers from a lack of continuous quality control. The government has considered ending the program, but it is likely that the program will be discontinued only for new families because the families who currently receive it do not perceive it as an entitlement. Again, a reform that began with the intention of changing the status quo has all but reinforced it.

*Wasta* represents the value of social connections that are important not just for Qataris but in most societies as a way to navigate the world and achieve gains for individuals or the groups to which they belong. Even though fewer girls perceived the benefits of *wasta*, its positive association with higher tests scores in English for girls highlights the positive externalities of social capital discussed by other researchers and presented in the literature review: the system of obligations, norms, and reciprocity that allow individuals to benefit from weak ties in a country that possesses few formal institutions.

However, the negative association of *wasta* for boys does seem to reinforce the idea that *wasta* does not equalize opportunities to the extent of providing groups or individuals who are “less deserving” with access to resources.

Nevertheless, consistent with the points made above with respect to the social contract, it makes more sense from the perspective of policy to work with the systems already in rather than to dismantle them. *Wasta* could be put to use as an efficiency tool. The education and employment sectors can and should foster the means by which social networks are created. Similar to the ways in which guilds promoted the economic success of particular merchants in the United States and the way that students use their alumni status at an Ivy League institution to obtain access to greater opportunities, *wasta* could be used by many Qataris as a way to enhance their opportunities.<sup>2</sup>

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<sup>2</sup> In response to criticisms, institutions in the United States did not eradicate the use of school quality and prestige or membership in well-known professional associations as a proxy for information about an individual’s skills and qualifications, but instead expanded access to these social networks by promoting the inclusion of minority groups. For example, employers still give weight to the fact that an applicant graduated from an Ivy League school. In the past, this weight may have been seen as a way to simply reinforce privilege among certain groups. However, to address this concern over time, Ivy League schools have significantly expanded their admission to include a greater variety of students, such as the economically disadvantaged; ethnic, racial, and religious minorities; and international students.

The findings of this study also have implications for other aspects of social capital such as the contribution of social capital to a civic society. Qataris face challenges with respect to social integration with the larger, more diverse population of expatriates who reside in Qatar. Qataris are faced with the reality of being insular in their society but also being part of a larger society. This challenge is further intensified by existing policies, such as the economic policy of Qatarization and social policies that focus on preserving the traditions and maintaining the authenticity of the Qatari identity. In some way, both policies can contribute to an exclusionary mentality.

This challenge is particularly important to Qatar for two reasons. First, as the findings of this study indicate, a closed mentality of exclusion is associated with poor academic performance. Qatari students who embraced a bridging mindset had a broader perspective on the value of increasing their knowledge and had more positive attitudes toward their academic achievement. The creation of the competing groups, Qataris vs. expatriates, contributes to one of the negatives of social capital: downward leveling of norms. The results of this study support the notion, described by Portes, that, as groups strengthen their identity around opposition to a dominant culture, they reject aspects of the dominant culture, which may be necessary for their ultimate success. In some respects, Qatari nationals are the minority population in Qatar because of the size of their population relative to that of expatriates. Just as African American students in the United States who adopted the attitudes and speech of an educated majority population were

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Consequently, although preferential weight is still given to members of those schools, the privileges have been extended to a more diverse population. Similarly, in Qatar, educational institutions and the employment sector could encourage the beneficial use of networks by finding ways to improve student access to professional networks.

accused of “acting white,” Qataris face the burden of acting modern. Qatari students who work hard and seek academic achievement work against the attitudes that school is not necessary for future success. Qatari employers who advocate for greater accountability in the workplace work against the collectivist culture and may appear to be traitors willing to abandon their Qatari culture in favor of modernity.

The second reason for the challenging nature of integration is particularly important to the development of Qatari human capital and relates to the fact, discussed in the literature review, that interactions with other groups are needed to foster trust and cooperation, elements which are both necessary for economic and social sustainability. Putnam (1993) argued that civic engagement allowed individuals to expand their social networking, which led to economic prosperity. Economic and social development flourished with the existence of more individual weak ties that expand individuals’ associations and facilitate greater exchange of information (Granovetter, 1973). Qatar’s current economic development model relies on the contribution of expatriates who emigrate from all over the world. Because Qataris greatly value their traditions and the formation of bonds within their own networks, Qataris have few incentives to find mutual interests in external networks. Also, because of the limited availability of civic institutions, Qataris have limited means for social integration with the wider population.

Achieving a balance between preserving the past and moving toward a modern society is not a simple or easy task. On the one hand, most of the international organizations around the world highlight the importance of the preservation of ethnic and national identity through cherishing language, customs, and traditions. It follows that introducing local social policies to preserve traditions and language is not outside the norm. At the same time, there is a need for social integration with the larger population in Qatar, so that Qataris can appreciate diversity and

be willing to exchange and accept knowledge from the different backgrounds that compose the expatriate community.

### **Recommended Structural Changes**

The results of this study imply that a need exists for Qataris to make structural changes to existing institutions or create new institutions as outlined below. Doing so would facilitate the revision of the social contract between Qatar and its citizens and would reinforce the positive externalities of social capital.

**Qatar must realign economic entitlements to promote accountability.** In Qatar, principles of competition and a focus on accountability work against the cultural inclination of Qataris. The collective culture makes it difficult to punish students and workers for poor performance. Qataris whose actions contradict these principles risk the disapproval and condemnation of others within their community. For example, directors of ministries within the public sector have expressed frustration about their inability to adequately respond to the reality of an unproductive workforce. Workers are almost always reviewed positively irrespective of their performance. This practice is often explained with reference to discomfort about putting a fellow Qatari in an untenable position: an unsatisfactory rating may have unfavorable consequences such as causing a fellow Qatari to be terminated and, therefore, less able to care for his or her family. To avoid creating such a conflict, directors often engage in an employment shuffle in which nonperforming employees are merely shuffled from one position or department to another. Ultimately, however, although censure has been avoided, what effect do such moves have on employees' self-worth and how do they ultimately contribute to productivity or



efficiency? Introducing accountability measures does not necessarily imply that Qataris will be at a disadvantage. Instead, it can possibly encourage better performance.<sup>3</sup>

For Qataris to realign their perceptions with reality, the social contract needs to be modified to transition economic entitlements to economic incentives. This is particularly true of programs such as Qatarization. Qatarization provides citizens with opportunities that would otherwise be difficult for Qataris to obtain. It provides a safety net by guaranteeing health, education, and housing, which are all essential elements for enhancing human development and well-being. Most importantly, it ensures that Qataris have the opportunity to participate in the cultivation of their own natural resources and not solely rely on exploitation of those resources by foreigners. In providing these benefits, Qatarization is no different from systems of preference used in non-rentier states, similar to affirmative action programs in the United States, which are

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<sup>3</sup> Some movement toward accountability has already occurred. In the past, Qataris experienced a fairly stable safety net, which was available to employees who become unemployed after termination for cause or redundancy. Terminated employees were able to petition the “Central Chapter” (Al band al Markazi) to receive their full salaries. However, because so many Qataris were terminated during the reform period due to lack of sufficient skills and training, the Centralized Bureau now only administers full benefits to retirees. Those terminated employees can receive some form of assistance but are now required to look for employment to remain eligible for benefits. Unproductive, unprofessional, or poorly performing workers face greater restrictions. For example, if an employee is fired multiple times, they are investigated and may face some disciplinary action such as a decrease in their salary benefits. If the employee is young, they may face expulsion from the program entirely.

implemented to promote greater inclusion of ethnic, sexual, and racial minorities in the workplace. However, in the same way that implementation of such programs faces challenges in the United States, Qatarization can have negative impacts on the intended beneficiaries.

An important issue in strengthening accountability is to ensure that Qataris not only have access to certain aspects of the labor market but also have the skills necessary to create a value-added contribution. In particular, companies and institutions need to be given full control over employee discipline and employee rewards so that they may create incentives for good performance and create disincentives for poor performance and unprofessional behavior. Simply having the right to terminate an employee is not sufficient. What is important is that with this ability to respond to employee behavior, employers should also have the obligation to train employees in a way that enhances productivity. Companies should adopt performance-based systems that clearly articulate performance expectations and encourage accountability for employee and management behavior and provide transparency in hiring and promotion processes. Promotions should be based on concrete and measurable employee accomplishments rather than the number of years in service. Prospective Qatari job seekers should also be equipped with the requisite skills for the position sought. Moreover, salaries in the public sector should be better aligned with those of similar positions in the private sector.

What is true about the labor force is also true of education. The findings of this study reinforce what other research studies have found: even highly motivated students, once they graduate, recognize that the rentier system's lack of accountability and the state's reliance on rented resources hinder efforts to make progress and implement reforms (Ramady, 2015).

Furthermore, schools need to implement and reinforce accountability by aligning grades with performance. Teachers should not fear disapproval or censure for giving Qatari students poor

grades, but should be encouraged to reward high performance and effort. They should also be encouraged to transition students' for participation in the labor market.

**Qatari institutions should encourage and foster values consistent with modernity.**

Values are important. I am not advocating a change to the collectivist ideals of Qatari culture, which values the traditions and norms of the Qatari people. I am advocating a reintroduction and reinforcement of those norms to which Qataris originally adhered. Norms and values of hard work and accountability need to be enforced at work, and because perceptions are formed and persist over time, they need to be introduced as early as possible. Ogbu and Simons (1988), in their discussion of the implications of policies intended to address the academic challenges associated with voluntary and involuntary groups of minority students in the United States, offered ways to enhance student success through the modification of value systems. The implications they highlighted are closely tied to the implications suggested in this study. Qatar needs not only to shape the way students value education but should also help them to understand that the pursuit of academic excellence does not require a binary choice between stripping their cultural identity and adopting modern principles of accountability. One suggestion Ogbu and Simons gave to cultivate this shift in values was to provide students with concrete role models with whom they could identify. Specifically, such a role model would be a Qatari who retains and exemplifies traditional cultural elements and has achieved high academic success and corresponding success in the labor market. Students should be able to clearly see that the person's academic success contributed to his or her professional success and reputation without having to resort to the perception that they were due to the effects of social connections or *wasta*.

A very effective way to provide these role models is to create pipeline programs from school to work that provide students with early exposure to the professional world. In Qatar there

has been a recent increase in the availability of training programs, but they are difficult to obtain. Consequently, students lack experience with the expectations and demands of the labor market. Such pipeline programs should give students the opportunity to explore diverse professional environments, both public and private. They should also be tailored to encourage students to look for more challenging jobs, including those involving risk taking, and should encourage innovation. These programs, which may operate in a similar way to internships or externships, can be a means of both improving professional networks and shaping a clearer understanding of the rewards of hard work.

Finally, the involvement of various actors is necessary to encourage students to have an open mindset of respect, productivity, and commitment toward their own progress and toward the betterment of their community. Schools should adopt and implement various workshops to train teachers to integrate instruction in character building through volunteer projects and other community-based activities. Schools need to find creative ways to involve parents because values are usually established at home and are highly influenced by parents. Similar to another of Ogbu and Simons' (1988) recommendations, I recommend more integration between schools, parents, and the surrounding community, and I believe that parents should help students appreciate the value of education and the values associated with modernity.

**Qatar must foster the development of civic associations.** Policymakers should facilitate the creation of associations that represent community interests for both Qataris and expatriates. Greater Qatari engagement in the wider society will help to create mutual respect and an appreciation for different values.

The ultimate manifestation of the political value of individuals rests in the representation of their interests in government. People need a forum in which to call for greater efficiency,

transparency, and accountability from the government. Although Qataris presently have the means to express a political voice through the news, social media, and different *majlis* gatherings, few formal political institutional venues exist in which they can voice opinions and participate in public decision making. The current Majlis Al-Shura does not have the mechanism to enforce policies and is not subject to a system of elections. Qatar should make efforts to increase political engagement tailored to traditional and social norms. The country has already entertained a modification of the existing Majlis Al-Shura that would subject its members to a system of elections. Such a system would create a channel through which political opinions could flow. The benefit that would result from this is that Qataris could participate as stakeholders in their own destiny. As such, it could foster an appreciation of reform policies that seek to develop Qatar into a more modern nation.

### **Implications for Future Research**

It is perplexing to see Qataris adopting, with little reservation, many aspects of a modern lifestyle but appearing to reject those aspects that are necessary for long-term economic and societal sustainability. As illustrated by the widespread use of social media and the receiving of international recognition for openness in media, it is evident that Qataris have embraced technological advancements in media and communication. Qatar makes a significant contribution to the global landscape by hosting visitors from many countries; attracting international events in sports, education, health care, and economics; and even hosting political debates. Nevertheless, the core elements of modernity that contribute to political development—a focus on individual responsibility, the promotion of an educated citizenry, and a focus on the accountability and transparency of government institutions—do not appear to be a part of Qatari youth’s modernization aspirations.

In this study, I have revealed important findings about Qatari students' academic performance and its association with the conflicting perceptions that students have about entitlements, the competing values of education and social networking, and the positive associations of bridging and the negative associations of bonding. Nevertheless, in doing so I have also suggested areas in which Qataris can benefit from further research to better understand the impediments preventing them from truly becoming modern and meeting the goals of human capital development.

**Seeking a deeper understanding of Qatari boys.** There is a worldwide debate is currently taking place about the differences in learning between boys and girls. Although some of the associations found in this study were similar across genders, I also found a clear difference in gender in terms of perception, educational aspirations, and other important academic characteristics. However, the conditions that continue to hamper Qatari boys' success are still unknown that continue to hamper Qatari boys' success. What is known is that Qatari boys engage in reckless behaviors, such as dangerous driving, and are more likely to exhibit disruptive behaviors and discipline problems in schools than girls. Also, boys are socialized differently from Qatari girls. As boys move closer to adulthood, they spend more time socializing in masculine pursuits and in the company of other boys or men. In this study, it was difficult to investigate the culture of Qatari boys as a result of the cultural barriers preventing a female researcher from thoroughly investigating the environment in which boys study in Qatari public schools, which are separated by sex. Moreover, Qatari boys are generally more likely to be taught by expatriates. The teaching dynamic between expatriates and Qataris may be one of friendship rather than authoritarianism. A study that more closely investigates the cultural and

social dynamic of Qatari boys, both in and outside school, would be valuable for identifying those characteristics that encourage or discourage their academic success.

**Incorporating private schools.** Another area of investigation into private schools in Qatar would also be useful not only for trying to understand the basis of boys' academic underperformance but also for understanding Qatar's movement toward modernity.<sup>4</sup>

**Investigating additional factors known to be associated with educational achievement.** Research supports the idea that parental engagement, teacher quality, and teacher interaction are each related to academic achievement. Studies have found that Qatari youth

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<sup>4</sup> The current trend in education, fostered by the current voucher system, is for Qatari parents to send their children to private schools. However, there are two interesting aspects to private school education. On the one hand, parents are discovering that as children progress to upper grades they struggle academically. Academic weaknesses, especially for boys, become more evident in middle-school test scores. Private schools make it more difficult to achieve passing scores on exams compared to Qatari public schools. Consequently, parents are choosing to return many boys to public school during their middle school career. On the other hand, girls face a different dilemma as they progress through school. The culture of private schools may be different from traditional Qatari schools in that they may be coeducational and may expose students to different cultural and religious training. Some parents desire to transfer girls to Qatari public schools to reinforce Qatari cultural identity and norms. In either case, the story of Qatari underperformance cannot be fully explained without investigating the characteristics and performance of Qatari students in private schools.

lacked guidance in career and education from parents and that Qatari parents were unlikely to read to their children. Given the fact that academic research has found that the consistent presence of positive influences from early childhood can affect youth outcomes, an investigation into parental engagement could shed significant light on why Qatari students, particularly boys, underperform academically.

Teacher interaction and teacher quality is another area worth investigating, as many studies have found that teachers have a significant impact on student achievement. This is particularly important in Qatar because of the dominance of expatriate teachers.

I conclude with the following thought offered by the famous Islamic philosopher, Dr. Iqbal Muhammed: “The search for rational foundations in Islam may be regarded to have begun with the Prophet himself. His constant prayer was: ‘God! Grant me knowledge of the ultimate nature of things!’” (1934).





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APPENDIX A: Survey

Study Title:

**Qatari High School Boys' Perceptions and Attitudes Toward Education in the State of Qatar**

<b>Student Number</b>	<b>Grade</b>	<b>Section</b>	<b>School ID</b>	
<b>Date:</b>		<b>School:</b>		



## Introduction

Dear student,

On behalf of a doctoral researcher, the Social and Economic Survey Research Institute (SESRI) at Qatar University in Doha, Qatar, is conducting an education survey and you were selected at random to be part of our sample. The information you provide will be strictly confidential and your name will not be printed or used in any documents and will not be associated with any of your answers to our questions. The results from the data analysis will only be presented in an aggregate format.



The purpose of this survey is to explore Qatari Independent Secondary School students' perceptions of and attitudes toward education in Qatar. Your answers are very important as they will assist in improving the quality of education and in informing educational policies. Your participation in the survey and your candid responses are very important for the success of this effort.

### Instructions:

1. Please read all the questions and statements in this questionnaire carefully and select the responses that best describe your views.
2. Be assured that your answers will be kept strictly confidential and will only be used for the purposes of this research. Your responses will have absolutely no effect on your achievement.
3. You may choose to skip any question that you do not wish to answer. However, answering all questions will be very helpful to Qatar's educational institutions in planning their education programs.

If you have any questions about what you just read, please ask the researcher in your classroom before you proceed.

If you have understood the above, or if your questions have been answered clearly, please choose ONE of the following:

- I agree to participate in this study  please proceed to the next page
- I do NOT agree to participate in this study  Thank you for your time, and good luck with your studies!

### Please note the following:

1. Remember that all the questions are related to your school and teachers.
2. After you finish the questionnaire, please give it to the person who brought it to you.

**SECTION A: STUDENTS' DEMOGRAPHIC PROFILE**

**Q1. What is your date of birth?**

<i>Day</i>	<i>Month</i>	<i>Year</i>

**Q2. What is your father/male guardian's highest education degree or certificate?**

- 1.  Never joined school
- 2.  Primary
- 3.  Preparatory
- 4.  Secondary
- 5.  Post-Secondary Diploma
- 6.  Bachelor's Degree
- 7.  Master's Degree
- 8.  Ph.D.
- 9.  I do not know

**Q3. What is your father/male guardian's current employment status?**

- 1.  Full-time employee (Official working hours 7:00 a.m. to 2:00 p.m.)
- 2.  Part-time employee (Less than 8 working hours)
- 3.  Unemployed, seeking a job      **→** Go to Question 6
- 4.  Unemployed, not seeking a job      **→** Go to Question 6
- 5.  Retired      **→** Go to Question 6
- 6.  Unable to work      **→** Go to Question 6
- 7.  Other (Please specify) .....

**Q4. Which sector does your father/guardian currently work in?**

- 1.  Governmental Organization (Fully funded by the government; e.g., ministries, governmental schools, supreme councils)
- 2.  Semi-Governmental Organization (Organizations jointly owned by the government; e.g., most oil sector organizations)
- 3.  Private (Private businesses or enterprises)
- 4.  Other (Please specify): .....

**Q5. What is your father/male guardian's main occupation?**

.....

**Q6. What is your mother's current employment status?**

1.  Never joined school
2.  Primary
3.  Preparatory
4.  Secondary
5.  Post-Secondary Diploma
6.  Bachelor's Degree
7.  Master's Degree
8.  Ph.D.
9.  I do not know

**Q7. What is your mother's current employment status?**

1.  Full-time employee (Official working hours 7:00 a.m. to 2:00 p.m.)
8.  Part-time employee (Less than 8 working hours)
2.  Unemployed, seeking a job → Go to Question 10
3.  Unemployed, not seeking a job → Go to Question 10
4.  Retired → Go to Question 10
5.  Unable to work → Go to Question 10
6.  Other (Please specify) .....

**Q8. Which sector does your mother currently work in?**

1.  Governmental Organization (Fully funded by the government; e.g., ministries, governmental schools, supreme councils)
2.  Semi-Governmental Organization (Organizations jointly owned by the government; e.g., most oil sector organizations)
3.  Private (Private businesses or enterprises)
4.  Other (Please specify): .....

**Q9. What is your mother's main occupation?**

.....

**SECTION B:**

First, thinking about your future plans, we would like to ask you the following questions:

**Q10. How confident are you that you will graduate from high school?**

1.  Very confident
2.  Somewhat confident
3.  Somewhat not confident
4.  Not confident at all

**Q11. In your opinion, how far will you go with your studies? (Please check one answer).**

1.  I will not finish high school → Go to Question 12.
2.  I will graduate from high school, but will not go any further.
3.  I will obtain a certificate from a college with a 2-year program (diploma) (e.g., College of the North Atlantic-Qatar or the Community College of Qatar).
4.  I will obtain an undergraduate degree (Bachelor's degree) from a university (e.g., Qatar University or one of the universities in Education City, a university abroad).
5.  I will finish the post-graduate program with a degree in higher studies (Master's degree, PhD, etc.).

**Q12. What do you plan on doing immediately after high school? (Please check one answer).**

1.  I plan to enroll in a college or a university within Qatar.
2.  I plan to enroll in a college or a university abroad.
3.  I plan to work immediately after finishing high school.
4.  I have not decided what I want to do.

**Q13. What kind of work do you expect to do in the future? (Please check one answer).**

1.  Military
2.  Police
3.  School Teacher
4.  University Professor
5.  Lawyer
6.  (Physician) Medical Doctor
7.  Nurse
8.  Engineer
9.  Journalist/Media Person
10.  Researcher/Scientist
11.  Businessman
12.  Diplomat
13.  Other (Please specify) \_\_\_\_\_

14.  I have not decided yet

**Q14. Now, I would like YOU to indicate your level of agreement with a number of statements about work (job) according to the following scale: Strongly agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly disagree (SD).**

	<b>SD</b>	<b>D</b>	<b>A</b>	<b>SA</b>
	1	2	3	4
1. The government guarantees me a job.				
2. If I wanted to start a business, there are no government programs to help fund my entrepreneurial project.				
3. Unemployment does not exist in my country among Qataris.				
4. Not any Qatari who wants a job can get one.				
5. Jobs are easy to get in the military and police sectors.				
6. Finding a job in government sectors is difficult.				
7. Qataris are guaranteed a job upon graduation from high school.				
8. The private sector (non-governmental companies) is not required by the government to hire Qataris.				

**Q15. Now, I would like YOU to indicate your level of agreement with a number of statements about work (job) according to the following scale: Strongly agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly disagree (SD).**

	<b>SD</b>	<b>D</b>	<b>A</b>	<b>SA</b>
	1	2	3	4
1. I will be entitled to many benefits along with a high salary in any job I get.				
2. My salary as a Qatari citizen should not be higher than that of non-Qataris in the same job.				
3. A government job (companies funded by the government) does not require a lot of effort from me.				
4. Private sector jobs (non-governmental companies) do not enable me to learn more skills (e.g., language, technology, and working with people of other nationalities), compared to working in the governmental sector.				
5. I get frustrated when given a task that is difficult to conduct.				
6. I believe that having a challenging task would not inspire me to work harder.				
7. Jobs that do not involve challenges/difficulties will be boring.				
8. A private sector job (non-governmental companies) is appealing to me because it demands a lot of effort.				
9. I do not believe that obtaining education is an important step on the path to a successful career.				

10. The purpose of education is to prepare me for my career.

**Q16. Now, I would like YOU to indicate your level of agreement with a number of statements about work (job) according to the following scale:** Strongly agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly disagree (SD).

	<b>SD</b>	<b>D</b>	<b>A</b>	<b>SA</b>
	1	2	3	4
1. As a Qatari, it is not possible to lay me off from my job.				
2. Once I get a job, I will be automatically promoted up the ladder regardless of my performance at work.				
3. There are no consequences for the following behaviors at work:				
a. Being absent				
b. Arriving late				
c. Leaving early				
d. Taking a vacation when your effort is needed				
e. Doing personal work during work hours				
4. There are no consequences for poor performance on the job at work:				
a. Not completing an assigned task				
b. Procrastinating				

**Q17. Now, I would like YOU to indicate your level of agreement with a number of statements about your social interactions as they relate to your education according to the following scale:** Strongly agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly disagree (SD).

	<b>SD</b>	<b>D</b>	<b>A</b>	<b>SA</b>
	1	2	3	4
1. Academic achievement is not important for me as a Qatari person.				
2. Earning the respect of my peers and relatives is not related to my academic achievement.				
3. My grades in school affect my status/role in the family.				
4. What I learn in school will make me a better person in the society.				
5. I cannot fully control my academic achievement.				
6. Doing well on tests is important to me.				
7. Who you know is not necessarily more important for getting high-salary jobs than having better skills and education.				
8. My relatives and contacts will help me get a good job regardless of my academic performance.				
9. Mastering the taught subject at school is not essential for becoming an educated citizen.				

10. In the workplace, people with better connections are more likely to get promoted regardless of their work performance.				
11. Studying at school is less important than learning about various aspects of manhood.				
12. Misbehaving in class at school does not affect my learning.				
13. My classmates make fun of me if I take my school work seriously.				

**Q18. On a scale of 1 to 3 (where 1 = Not important at all (NI), 2 = Somewhat not important (SNI), 3 = Somewhat important (SI), and 4 = Very important (VI)), rate the level of importance of each of the following attributes for getting a good job in Qatar:**

	NI	SNI	SI	VI
	1	2	3	4
1. Getting an excellent education				
2. Family or personal connections				
3. Proficiency or fluency in English				
4. Being known as a hard-working person				
5. Having well-rounded life experiences				
6. Setting and achieving ambitious goals				

**Q19. Now, I would like YOU to indicate your level of agreement with a number of statements about your involvement in the according to the following scale: Strongly agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly disagree (SD).**

	SD	D	A	SA
	1	2	3	4
1. I would not hesitate to help those in need in my country.				
2. Joining social or sports clubs (Barzan, Mawater) is very important for my future career.				
3. I don't have any non-Qatari friends with whom I socialize on a regular basis (once a week or more).				
4. Interacting with non-Qataris in my future work will create a work environment that encourages positive collegial competition.				
5. I do not feel that I grow more as a person when I interact with people who don't share my faith.				
6. I am unable to interact with people who don't share my values.				
7. I value having friends from different parts of the world.				
8. I would not expect to interact with people from other countries in my future career.				
9. It is my duty to maintain the customs and traditions of my country.				

**Q20. Now, I would like YOU to indicate your level of agreement with a number of statements about your involvement in the society according to the following scale: Strongly agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly disagree (SD).**

	SD	D	A	SA
	1	2	3	4
1. I believe that non-Qataris should not have the same privileges as Qataris.				
2. I believe that Qatar hosts a diverse population from all over the world.				
3. Non-Qataris at work create an obstacle for me to be promoted.				
4. I am comfortable with our country's openness to different cultures of the world.				
5. I believe that non-Qataris should not work in the public (governmental) sector.				
6. I believe that having non-Qataris working in government jobs is essential for the Qataris in order to develop the country further.				

**Q21. How many hours do you spend each week on homework assignments related to each of the following subjects?**

	None	1–2 hours	3–4 hours	5–6 hours	More than 6 hours
	1	2	3	4	6
1. Math					
2. Science					
3. English					
4. Arabic					
5. Other subjects					

**Q22. In a typical week, how often do your parents, guardians, or others at home help you with your homework assignments?**

1.  Not at all
2.  Once
3.  Twice
4.  Three times
5.  Everyday

**End of Survey**

**Thank you very much for taking part in this study**



If you have any questions about this study, you may contact the Social and Economic Survey Research Institute (SESRI) at Qatar University:

Tel: 44033020, or email: [sesri@qu.edu.qa](mailto:sesri@qu.edu.qa)

APPENDIX B: Additional Tables

**Hypothesis I: The Relationship Between Perceptions of Entitlement and Accountability and Male High School Student Achievement in Qatar**

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.303*** (0.0304)		0.282*** (0.0289)		0.351*** (0.0315)
Abstract Entitlement <sup>c</sup>	-0.011 (0.0297)	-0.013 (0.0283)	0.066** (0.0296)	0.054* (0.0282)	0.036 (0.0290)	0.026 (0.0271)
Concrete Entitlement <sup>c</sup>	-0.0622** (0.0292)	-0.0543* (0.0278)	-0.100*** (0.0291)	-0.0697** (0.0279)	-0.0424 (0.0282)	-0.00889 (0.0266)
Lack of Accountability <sup>c</sup>	-0.0630** (0.0300)	-0.0663** (0.0285)	-0.0528* (0.0297)	-0.0366 (0.0284)	-0.00388 (0.0288)	-0.00426 (0.0270)
Age (in years)	-0.0629 (0.0448)	-0.0345 (0.0432)	-0.132*** (0.0446)	-0.0909** (0.0429)	0.00113 (0.0427)	0.00766 (0.0400)
High School Graduation Confidence	0.0704 (0.0503)	0.0262 (0.0480)	0.181*** (0.0501)	0.161*** (0.0477)	0.0902* (0.0484)	0.0698 (0.0454)
<i>Students' Educational Expectations (reference category: will not finish high school)</i>						
College or university inside Qatar	-0.0690 (0.154)	-0.111 (0.146)	0.223 (0.153)	0.199 (0.146)	0.0537 (0.146)	-0.00913 (0.137)
College or university outside Qatar	0.0227 (0.155)	-0.0481 (0.148)	0.191 (0.155)	0.165 (0.147)	0.183 (0.148)	0.0713 (0.138)
Work after high school	-0.0582 (0.172)	-0.0915 (0.163)	0.204 (0.171)	0.191 (0.163)	-0.0151 (0.163)	-0.0889 (0.152)
Have not decided yet	-0.0432 (0.163)	-0.0914 (0.155)	0.172 (0.162)	0.137 (0.154)	0.0588 (0.155)	-0.0327 (0.145)
<i>Job Aspirations (reference category: Military)</i>						
Teacher	-0.0508 (0.295)	-0.00358 (0.280)	0.0712 (0.294)	0.00993 (0.280)	-0.0722 (0.279)	0.0534 (0.261)
Lawyer	-0.179 (0.175)	-0.362** (0.168)	-0.0144 (0.172)	-0.112 (0.164)	-0.0892 (0.163)	-0.251 (0.154)
Medical	0.216 (0.261)	0.106 (0.248)	0.602** (0.260)	0.434* (0.248)	0.428* (0.247)	0.315 (0.231)
Scientist	0.216** (0.0973)	0.138 (0.0928)	0.0998 (0.0969)	0.0686 (0.0924)	0.165* (0.0941)	0.169* (0.0881)

Businessman	-0.0105	-0.0571	-0.0979	-0.121	-0.0847	-0.108
	(0.106)	(0.101)	(0.106)	(0.101)	(0.108)	(0.101)
Have not decided yet	-0.114	-0.114	-0.0714	-0.0688	0.00952	-0.0510
	(0.0929)	(0.0883)	(0.0925)	(0.0881)	(0.0895)	(0.0839)
Government	0.0467	0.00776	0.174*	0.167*	-0.0650	-0.0871
	(0.0970)	(0.0924)	(0.0964)	(0.0918)	(0.0948)	(0.0887)
Semi-Government	0.136	0.233	-0.110	-0.176	0.0104	0.137
	(0.415)	(0.395)	(0.414)	(0.395)	(0.393)	(0.367)
<i>Hours Studying by Subject</i>						
Math	-0.0289	-0.0299	-0.0420	-0.0335	-0.0531	-0.0482
	(0.0503)	(0.0478)	(0.0496)	(0.0473)	(0.0483)	(0.0453)
Science	0.0836	0.0534	0.0367	0.0298	0.0615	0.0462
	(0.0532)	(0.0507)	(0.0529)	(0.0505)	(0.0511)	(0.0479)
English	-0.0751	-0.0716	0.0286	0.0312	-0.0313	-0.0177
	(0.0528)	(0.0502)	(0.0525)	(0.0500)	(0.0510)	(0.0478)
Arabic	-0.00181	0.0100	-0.0292	-0.0196	-0.0340	-0.0341
	(0.0509)	(0.0484)	(0.0507)	(0.0483)	(0.0489)	(0.0457)
Others	-0.0549	-0.0280	-0.0633	-0.0568	0.0133	0.0270
	(0.0395)	(0.0377)	(0.0394)	(0.0375)	(0.0379)	(0.0355)
<i>How often do your parents help you with your homework?</i>						
Father's Employment Status	-0.0111	0.00437	-0.0397*	-0.0246	-0.00953	-0.00731
	(0.0229)	(0.0218)	(0.0228)	(0.0217)	(0.0220)	(0.0206)
<i>(reference category: Governmental Sector)</i>						
Semi-Governmental Organization	-0.00413	0.00156	0.00106	0.0193	-0.0144	-0.00066
	(0.104)	(0.0986)	(0.103)	(0.0986)	(0.102)	(0.0958)
Private Sector	-0.0231	-0.0558	0.0738	0.147	-0.0518	0.0349
	(0.153)	(0.145)	(0.152)	(0.145)	(0.152)	(0.143)
Other	-0.117	-0.0119	0.0382	0.146	-0.246	-0.0787
	(0.176)	(0.168)	(0.176)	(0.168)	(0.170)	(0.160)
Unemployed	-0.296	-0.396*	-0.0617	-0.110	-0.137	-0.240
	(0.249)	(0.236)	(0.232)	(0.221)	(0.220)	(0.210)
Retired	-0.0515	-0.0442	0.0322	0.0304	-0.0857	-0.0717
	(0.0717)	(0.0682)	(0.0714)	(0.0681)	(0.0697)	(0.0653)
<i>Mother's Employment Status (reference category: Governmental Sector)</i>						
Semi-Governmental Organization	0.0833	0.151	0.0807	0.0664	0.0936	0.140

	(0.179)	(0.170)	(0.178)	(0.170)	(0.185)	(0.173)
Private Sector	0.0226	0.0799	-0.319	-0.316	0.0755	0.0950
	(0.223)	(0.212)	(0.223)	(0.212)	(0.212)	(0.199)
Other	0.0215	0.0606	-0.106	-0.0640	-0.197*	-0.0920
	(0.111)	(0.106)	(0.111)	(0.106)	(0.108)	(0.101)
Housewife	-0.0319	-0.0327	0.0427	0.0366	-0.0374	-0.0196
	(0.0743)	(0.0708)	(0.0740)	(0.0706)	(0.0726)	(0.0680)
Unemployed seeking job	-0.0107	-0.0647	-0.0815	-0.131	-0.0842	-0.00812
	(0.193)	(0.184)	(0.193)	(0.184)	(0.187)	(0.175)
Retired	0.0382	-0.0112	0.0988	0.0586	0.119	0.0655
	(0.0933)	(0.0888)	(0.0928)	(0.0887)	(0.0904)	(0.0848)
<i>Student Grade Level</i> (reference category: Grade 9)						
Grade 10	0.0976	0.0791	-0.263***	-0.325***	-0.0494	-0.0921
	(0.0829)	(0.0794)	(0.0825)	(0.0793)	(0.0797)	(0.0751)
Grade 11	0.0414	0.0672	-0.151	-0.243**	-0.206*	-0.263**
	(0.117)	(0.113)	(0.117)	(0.113)	(0.113)	(0.107)
Indicates 2013 score was used as prior score		0.840*		1.051*		0.570*
		(0.508)		(0.620)		(0.315)
Constant	0.841	0.505	1.528*	0.913	-0.323	-0.285
	(0.787)	(0.756)	(0.784)	(0.752)	(0.752)	(0.704)
Observations	981	981	985	985	931	931
R-squared	0.055	0.149	0.137	0.219	0.064	0.183
Number of Schools	24	24	24	24	24	24

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

### Hypothesis I: The Relationship Between Perceptions of Entitlement and Accountability and Female High School Student Achievement in Qatar

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.465*** (0.0290)		0.452*** (0.0278)		0.604*** (0.0247)

Abstract Entitlement <sup>c</sup>	0.0249 (0.0297)	0.0131 (0.0264)	0.0701** (0.0272)	0.0402* (0.0241)	0.0154 (0.0282)	0.00683 (0.0222)
Concrete Entitlement <sup>c</sup>	-0.0432 (0.0320)	-0.00268 (0.0286)	-0.156*** (0.0293)	-0.0928*** (0.0262)	-0.113*** (0.0305)	-0.0630*** (0.0240)
Lack of Accountability <sup>c</sup>	-0.0405 (0.0299)	-0.0306 (0.0265)	-0.108*** (0.0273)	-0.0786*** (0.0243)	-0.0187 (0.0284)	0.0107 (0.0223)
Age (in years)	-0.157*** (0.0421)	-0.0969** (0.0377)	-0.0781** (0.0385)	-0.0200 (0.0344)	-0.167*** (0.0400)	-0.0604* (0.0317)
High School Graduation Confidence	0.202*** (0.0644)	0.0811 (0.0577)	0.161*** (0.0590)	0.0602 (0.0526)	0.296*** (0.0613)	0.116** (0.0486)
<i>Students' Educational Expectations (reference category: will not finish high school)</i>						
College or university inside Qatar	0.0376 (0.655)	-0.147 (0.582)	0.195 (0.601)	-0.0957 (0.532)	0.720 (0.624)	0.322 (0.490)
College or university outside Qatar	-0.0696 (0.659)	-0.213 (0.585)	0.254 (0.604)	-0.0504 (0.535)	0.836 (0.627)	0.335 (0.493)
Work after high school	-0.0651 (0.675)	-0.205 (0.600)	-0.217 (0.619)	-0.444 (0.548)	0.253 (0.643)	0.0207 (0.505)
Have not decided yet	0.00570 (0.660)	-0.115 (0.586)	0.123 (0.605)	-0.183 (0.536)	0.638 (0.629)	0.268 (0.493)
<i>Job Aspirations (reference category: Military)</i>						
Teacher	0.116 (0.218)	0.175 (0.194)	0.0944 (0.200)	-0.0864 (0.177)	0.0367 (0.208)	-0.0906 (0.163)
Lawyer	0.212 (0.209)	0.225 (0.185)	0.0463 (0.191)	-0.112 (0.170)	-0.181 (0.199)	-0.199 (0.156)
Medical	0.302 (0.217)	0.104 (0.194)	0.231 (0.199)	-0.148 (0.178)	0.291 (0.207)	0.00984 (0.163)
Scientist	0.385* (0.210)	0.287 (0.186)	0.154 (0.192)	-0.0225 (0.170)	0.0411 (0.199)	-0.193 (0.157)
Businessman	0.165 (0.204)	0.139 (0.181)	0.112 (0.187)	-0.145 (0.166)	0.0425 (0.194)	-0.134 (0.152)
Have not decided yet	0.205	0.161	0.124	-0.0900	0.153	-0.0613

	(0.201)	(0.179)	(0.184)	(0.164)	(0.192)	(0.151)
Government	0.147	0.172	0.0611	-0.151	0.125	-0.0450
	(0.210)	(0.187)	(0.193)	(0.171)	(0.200)	(0.157)
Semi-Government	-0.661	-0.755	-0.0992	-0.0754	-0.160	-0.282
	(0.558)	(0.496)	(0.512)	(0.453)	(0.532)	(0.417)
<i>Hours Studying by Subject</i>						
Math	-0.0239	0.0141	-0.0363	-0.0147	-0.0829	-0.0355
	(0.0589)	(0.0526)	(0.0540)	(0.0482)	(0.0561)	(0.0443)
Science	0.104**	0.0700	0.0683	0.0598	0.0769	0.0632
	(0.0524)	(0.0468)	(0.0480)	(0.0428)	(0.0499)	(0.0392)
English	-0.0875	-0.105*	-0.0547	-0.0940*	-0.0250	-0.0191
	(0.0630)	(0.0560)	(0.0577)	(0.0513)	(0.0600)	(0.0471)
Arabic	0.0251	0.0313	0.00214	0.0486	-0.0476	0.0124
	(0.0639)	(0.0568)	(0.0585)	(0.0519)	(0.0608)	(0.0477)
Others	-0.0308	-0.0592	-0.0364	-0.0218	0.0219	0.0195
	(0.0458)	(0.0408)	(0.0419)	(0.0373)	(0.0436)	(0.0342)
How often do your parents help you with your homework?	-0.108***	-0.0804***	-0.112***	-0.0717***	-0.0757***	-0.0494***
	(0.0256)	(0.0228)	(0.0234)	(0.0209)	(0.0243)	(0.0191)
<i>Father's Employment Status (reference category: Governmental Sector)</i>						
Semi-Governmental Organization	0.0863	0.0467	0.0292	-0.0167	0.265***	0.158**
	(0.0962)	(0.0855)	(0.0882)	(0.0782)	(0.0917)	(0.0721)
Private Sector	0.0830	0.0482	0.0274	0.0423	0.230**	0.223**
	(0.121)	(0.107)	(0.110)	(0.0972)	(0.114)	(0.0895)
Other	-0.324*	-0.230	-0.0460	0.0576	0.0961	0.0571
	(0.179)	(0.159)	(0.164)	(0.145)	(0.170)	(0.134)
Unemployed	-0.0231	0.0231	0.190	0.184	0.166	0.111
	(0.194)	(0.172)	(0.178)	(0.157)	(0.184)	(0.145)
Retired	0.118	0.0931	0.00370	0.0212	0.0817	0.0650
	(0.0718)	(0.0638)	(0.0657)	(0.0583)	(0.0683)	(0.0536)
<i>Mother's Employment Status (reference category: Governmental Sector)</i>						

Semi-Governmental Organization	-0.353 (0.227)	-0.295 (0.202)	-0.345* (0.208)	-0.147 (0.185)	-0.129 (0.216)	-0.0484 (0.170)
Private Sector	0.0678 (0.199)	0.0591 (0.177)	-0.279 (0.183)	-0.0347 (0.163)	0.0371 (0.190)	0.0218 (0.149)
Other	-0.00383 (0.146)	-0.0437 (0.130)	-0.169 (0.134)	-0.114 (0.118)	-0.103 (0.139)	0.0661 (0.109)
Housewife	0.0280 (0.0696)	-0.0680 (0.0621)	0.0500 (0.0637)	0.00277 (0.0565)	-0.0518 (0.0662)	-0.0161 (0.0520)
Unemployed seeking job	-0.109 (0.155)	-0.158 (0.137)	0.0920 (0.142)	0.0817 (0.126)	-0.0243 (0.147)	0.0344 (0.116)
Retired	0.146 (0.0915)	0.0164 (0.0817)	0.133 (0.0835)	0.124* (0.0740)	0.168* (0.0868)	0.0982 (0.0682)
<i>Student Grade Level (reference category: Grade 9)</i>						
Grade 10	0.260*** (0.0791)	0.197*** (0.0704)	0.383*** (0.0723)	0.373*** (0.0641)	0.265*** (0.0751)	0.241*** (0.0590)
Grade 11	0.452*** (0.124)	0.123 (0.112)	0.422*** (0.113)	0.154 (0.102)	0.422*** (0.118)	0.0388 (0.0940)
Indicates 2013 score was used as prior score		-0.209 (0.412)		0.804* (0.435)		-0.131 (0.260)
Constant	1.881* (0.987)	1.718* (0.878)	0.755 (0.904)	0.531 (0.802)	1.033 (0.940)	0.307 (0.738)
Observations	1,010	1,010	1,013	1,013	1,013	1,013
R-squared	0.105	0.296	0.180	0.358	0.161	0.485
Number of Schools	19	19	19	19	19	19

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

**Hypothesis I: The Relationship Between Perceptions of Entitlement and Accountability and All High School Student Achievement in Qatar**

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.374*** (0.0206)		0.350*** (0.0203)		0.486*** (0.0197)
Abstract Entitlement <sup>c</sup>	0.0133 (0.0207)	0.00269 (0.0192)	0.0796*** (0.0201)	0.0598*** (0.0188)	0.0300 (0.0201)	0.0216 (0.0174)
Concrete Entitlement <sup>c</sup>	-0.0558*** (0.0214)	-0.0391** (0.0198)	-0.120*** (0.0208)	-0.0784*** (0.0196)	-0.0758*** (0.0207)	-0.0330* (0.0180)
Lack of Accountability <sup>c</sup>	-0.0538*** (0.0208)	-0.0528*** (0.0192)	-0.0802*** (0.0202)	-0.0588*** (0.0189)	-0.0114 (0.0200)	-0.00277 (0.0174)
Age (in years)	-0.105*** (0.0302)	-0.0661** (0.0282)	-0.0977*** (0.0294)	-0.0504* (0.0276)	-0.0949*** (0.0289)	-0.0404 (0.0252)
High School Graduation Confidence	0.130*** (0.0392)	0.0617* (0.0364)	0.181*** (0.0381)	0.134*** (0.0356)	0.179*** (0.0378)	0.104*** (0.0329)
<i>Students' Educational Expectations (reference category: will not finish high school)</i>						
College or university inside Qatar	-0.0534 (0.145)	-0.124 (0.134)	0.273* (0.141)	0.242* (0.131)	0.0740 (0.139)	-0.0183 (0.120)
College or university outside Qatar	-0.0543 (0.147)	-0.125 (0.136)	0.267* (0.143)	0.235* (0.133)	0.176 (0.140)	0.0268 (0.122)
Work after high school	-0.110 (0.160)	-0.146 (0.148)	0.142 (0.156)	0.135 (0.145)	-0.106 (0.153)	-0.175 (0.133)
Have not decided yet	-0.0877 (0.151)	-0.125 (0.140)	0.185 (0.147)	0.148 (0.137)	0.0219 (0.145)	-0.0780 (0.126)
<i>Job Aspirations (reference category: Military)</i>						
Teacher	-0.0260 (0.115)	-0.0193 (0.106)	0.0433 (0.111)	0.0142 (0.104)	-0.0313 (0.110)	-0.0155 (0.0954)
Lawyer	-0.0331 (0.0926)	-0.0798 (0.0856)	-0.0551 (0.0898)	-0.0771 (0.0836)	-0.239*** (0.0888)	-0.209*** (0.0771)



Medical	0.136 (0.108)	-0.0550 (0.101)	0.248** (0.105)	0.0665 (0.0987)	0.272*** (0.104)	0.132 (0.0905)
Scientist	0.225*** (0.0766)	0.116 (0.0711)	0.0910 (0.0745)	0.0593 (0.0693)	0.0625 (0.0743)	0.0114 (0.0645)
Businessman	-0.0134 (0.0758)	-0.0721 (0.0702)	0.0144 (0.0737)	-0.0490 (0.0687)	-0.0572 (0.0749)	-0.0978 (0.0650)
Have not decided yet	-0.0199 (0.0711)	-0.0616 (0.0657)	0.0285 (0.0691)	0.00359 (0.0643)	0.0443 (0.0691)	-0.0204 (0.0601)
Government	0.00901 (0.0768)	-0.0268 (0.0710)	0.0968 (0.0746)	0.0660 (0.0694)	0.00551 (0.0750)	-0.0342 (0.0651)
Semi-Government	-0.155 (0.326)	-0.167 (0.301)	-0.0560 (0.317)	-0.0664 (0.295)	-0.0641 (0.311)	0.0384 (0.270)
<i>Hours Studying by Subject</i>						
Math	-0.0278 (0.0378)	-0.0186 (0.0350)	-0.0135 (0.0365)	-0.00497 (0.0341)	-0.0591 (0.0364)	-0.0380 (0.0317)
Science	0.0902** (0.0367)	0.0575* (0.0341)	0.0411 (0.0357)	0.0369 (0.0333)	0.0692** (0.0353)	0.0492 (0.0307)
English	-0.0748* (0.0396)	-0.0769** (0.0366)	-0.0123 (0.0386)	-0.0202 (0.0359)	-0.0298 (0.0383)	-0.0226 (0.0332)
Arabic	0.00918 (0.0391)	0.0221 (0.0362)	-0.0116 (0.0381)	0.00829 (0.0354)	-0.0393 (0.0377)	-0.0165 (0.0327)
Others	-0.0437 (0.0295)	-0.0365 (0.0273)	-0.0471 (0.0287)	-0.0433 (0.0268)	0.0162 (0.0284)	0.0221 (0.0246)
How often do your parents help you with your homework?	-0.0534*** (0.0169)	-0.0315** (0.0157)	-0.0764*** (0.0164)	-0.0510*** (0.0154)	-0.0433*** (0.0163)	-0.0288** (0.0141)
<i>Father's Employment Status (reference category: Governmental Sector)</i>						
Semi-Governmental Organization	0.0502 (0.0697)	0.0432 (0.0644)	0.00837 (0.0679)	0.00815 (0.0632)	0.144** (0.0678)	0.109* (0.0588)
Private Sector	0.0413 (0.0936)	0.0118 (0.0865)	0.0437 (0.0908)	0.0826 (0.0845)	0.140 (0.0907)	0.165** (0.0787)
Other	-0.221* (0.124)	-0.106 (0.115)	-0.0560 (0.121)	0.0500 (0.113)	-0.0907 (0.120)	0.00797 (0.104)
Unemployed	-0.146 (0.151)	-0.163 (0.139)	0.0414 (0.143)	0.0315 (0.133)	-0.0264 (0.140)	-0.0593 (0.122)

Retired	0.0189 (0.0501)	0.0213 (0.0463)	0.00539 (0.0487)	0.0129 (0.0453)	0.00132 (0.0484)	0.00363 (0.0420)
<i>Mother's Employment Status (reference category: Governmental Sector)</i>						
Semi-Governmental Organization	-0.0772 (0.139)	0.0126 (0.129)	-0.0444 (0.135)	0.0103 (0.126)	-0.000221 (0.140)	0.0900 (0.122)
Private Sector	-0.00696 (0.147)	0.0251 (0.136)	-0.304** (0.143)	-0.191 (0.133)	0.0189 (0.140)	0.0363 (0.122)
Other	0.00558 (0.0876)	0.0268 (0.0810)	-0.141* (0.0852)	-0.0867 (0.0794)	-0.181** (0.0846)	-0.0270 (0.0737)
Housewife	-0.0107 (0.0504)	-0.0511 (0.0466)	0.0402 (0.0490)	0.0194 (0.0456)	-0.0570 (0.0488)	-0.0254 (0.0423)
Unemployed seeking job	-0.0996 (0.120)	-0.132 (0.111)	0.0410 (0.117)	0.0160 (0.109)	-0.0673 (0.115)	0.00376 (0.100)
Retired	0.0906 (0.0648)	0.0176 (0.0600)	0.109* (0.0629)	0.0804 (0.0586)	0.133** (0.0623)	0.0721 (0.0541)
<i>Student Grade Level (reference category: Grade 9)</i>						
Grade 10	0.182*** (0.0566)	0.139*** (0.0525)	0.0754 (0.0550)	0.0310 (0.0514)	0.136** (0.0544)	0.0817* (0.0473)
Grade 11	0.229*** (0.0839)	0.122 (0.0782)	0.123 (0.0816)	-0.0327 (0.0768)	0.113 (0.0811)	-0.0894 (0.0710)
Indicates 2013 score was used as prior score		0.263 (0.321)		1.014*** (0.372)		0.247 (0.203)
Constant	1.451*** (0.545)	1.170** (0.507)	0.920* (0.530)	0.298 (0.496)	0.974* (0.523)	0.397 (0.455)
Observations	1,991	1,991	1,998	1,998	1,944	1,944
R-squared	0.061	0.200	0.110	0.230	0.089	0.315
Number of Schools	43	43	43	43	43	43

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

**Hypothesis II: The Relationship Between Perceptions of Social Networking and Value of Education and Male Student Scores**

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.306*** (0.031)		0.283*** (0.029)		0.354*** (0.031)
Value of education and doing well <sup>c</sup>	0.043 (0.031)	0.048 (0.030)	0.132*** (0.031)	0.110*** (0.029)	0.019 (0.030)	0.016 (0.028)
<i>Wasta</i> <sup>c</sup>	-0.019 (0.032)	-0.024 (0.030)	-0.0736** (0.031)	-0.0651** (0.030)	0.020 (0.030)	0.036 (0.028)
Job Skills <sup>c</sup>	0.001 (0.029)	-0.012 (0.027)	0.043 (0.028)	0.024 (0.027)	0.015 (0.027)	0.009 (0.026)
Age (in years)	-0.059 (0.045)	-0.030 (0.044)	-0.129*** (0.045)	-0.0877** (0.043)	0.001 (0.043)	0.007 (0.040)
High School Graduation Confidence	0.0831* (0.050)	0.037 (0.048)	0.178*** (0.050)	0.155*** (0.048)	0.0964** (0.049)	0.070 (0.045)
<i>Students' Educational Expectations</i> (reference category: will not finish high school)						
College or university inside Qatar	-0.090 (0.156)	-0.135 (0.148)	0.160 (0.154)	0.146 (0.146)	0.064 (0.147)	-0.007 (0.138)
College or university outside Qatar	0.010 (0.157)	-0.065 (0.150)	0.128 (0.156)	0.111 (0.148)	0.195 (0.149)	0.073 (0.139)
Work after high school	-0.083 (0.173)	-0.112 (0.165)	0.141 (0.171)	0.144 (0.163)	-0.029 (0.163)	-0.100 (0.153)
Have not decided yet	-0.059 (0.164)	-0.110 (0.156)	0.137 (0.162)	0.108 (0.154)	0.066 (0.155)	-0.035 (0.145)
<i>Job Aspirations</i> (reference category: Military)						
Teacher	-0.052 (0.296)	-0.003 (0.281)	0.010 (0.293)	-0.041 (0.279)	-0.092 (0.279)	0.056 (0.261)
Lawyer	-0.197 (0.176)	-0.376** (0.168)	-0.097 (0.172)	-0.174 (0.164)	-0.121 (0.164)	-0.274* (0.154)
Medical	0.192 (0.262)	0.085 (0.249)	0.567** (0.259)	0.409* (0.247)	0.434* (0.247)	0.319 (0.231)
Scientist	0.214** (0.099)	0.135 (0.094)	0.052 (0.098)	0.028 (0.093)	0.163* (0.095)	0.168* (0.089)
Businessman	-0.040 (0.106)	-0.087 (0.101)	-0.151 (0.105)	-0.161 (0.100)	-0.104 (0.108)	-0.121 (0.101)
Have not decided yet	-0.122 (0.093)	-0.122 (0.089)	-0.098 (0.092)	-0.091 (0.088)	0.005 (0.090)	-0.053 (0.084)

Government	0.026	-0.009	0.147	0.153*	-0.081	-0.102
	(0.098)	(0.093)	(0.097)	(0.092)	(0.095)	(0.089)
Semi-Government	0.098	0.183	-0.162	-0.228	0.038	0.172
	(0.418)	(0.397)	(0.414)	(0.394)	(0.394)	(0.368)
<i>Hours Studying by Subject</i>						
Math	-0.033	-0.034	-0.043	-0.033	-0.055	-0.053
	(0.051)	(0.048)	(0.050)	(0.047)	(0.049)	(0.045)
Science	0.086	0.056	0.034	0.027	0.062	0.044
	(0.054)	(0.051)	(0.053)	(0.050)	(0.051)	(0.048)
English	-0.080	-0.076	0.030	0.033	-0.034	-0.016
	(0.053)	(0.050)	(0.052)	(0.050)	(0.051)	(0.048)
Arabic	-0.010	0.003	-0.043	-0.029	-0.039	-0.034
	(0.051)	(0.049)	(0.051)	(0.048)	(0.049)	(0.046)
Others	-0.053	-0.025	-0.0648*	-0.058	0.012	0.027
	(0.040)	(0.038)	(0.039)	(0.037)	(0.038)	(0.036)
How often do your parents help you with your homework?	-0.013	0.003	-0.0463**	-0.030	-0.009	-0.008
	(0.023)	(0.022)	(0.023)	(0.022)	(0.022)	(0.021)
<i>Father's Employment Status</i> (reference category: Governmental Sector)						
Semi-Governmental Organization	-0.005	-0.003	-0.024	-0.006	-0.015	0.000
	(0.104)	(0.099)	(0.103)	(0.098)	(0.103)	(0.096)
Private Sector	-0.058	-0.092	0.046	0.128	-0.061	0.035
	(0.153)	(0.145)	(0.151)	(0.144)	(0.152)	(0.143)
Other	-0.145	-0.037	-0.043	0.084	-0.279	-0.096
	(0.177)	(0.169)	(0.175)	(0.167)	(0.170)	(0.160)
Unemployed	-0.293	-0.390	-0.036	-0.083	-0.142	-0.253
	(0.250)	(0.237)	(0.231)	(0.220)	(0.220)	(0.210)
Retired	-0.061	-0.053	-0.005	0.000	-0.092	-0.073
	(0.072)	(0.069)	(0.071)	(0.068)	(0.070)	(0.066)
<i>Mother's Employment Status</i> (reference category: Governmental Sector)						
Semi-Governmental Organization	0.075	0.149	0.115	0.101	0.091	0.148
	(0.180)	(0.171)	(0.178)	(0.169)	(0.185)	(0.173)
Private Sector	0.033	0.090	-0.339	-0.335	0.081	0.108
	(0.225)	(0.214)	(0.222)	(0.212)	(0.213)	(0.199)
Other	0.007	0.046	-0.119	-0.072	-0.199*	-0.087
	(0.112)	(0.106)	(0.111)	(0.105)	(0.108)	(0.101)
Housewife	-0.029	-0.030	0.052	0.044	-0.037	-0.019
	(0.075)	(0.071)	(0.074)	(0.070)	(0.073)	(0.068)

Unemployed seeking job	-0.026 (0.194)	-0.077 (0.184)	-0.108 (0.192)	-0.148 (0.183)	-0.109 (0.187)	-0.018 (0.175)
Retired	0.037 (0.094)	-0.011 (0.089)	0.121 (0.093)	0.080 (0.088)	0.112 (0.091)	0.056 (0.085)
<i>Student Grade Level</i> (reference category: Grade 9)						
Grade 10	0.101 (0.083)	0.081 (0.080)	-0.246*** (0.082)	-0.312*** (0.079)	-0.043 (0.080)	-0.091 (0.075)
Grade 11	0.062 (0.118)	0.083 (0.113)	-0.126 (0.117)	-0.230** (0.112)	-0.192* (0.114)	-0.256** (0.107)
Indicates 2013 score was used as prior score		0.859* (0.511)		1.102* (0.618)		0.600* (0.315)
Constant	0.793 (0.792)	0.446 (0.761)	1.645** (0.783)	1.008 (0.750)	-0.324 (0.754)	-0.263 (0.704)
Observations	981	981	985	985	931	931
R-squared	0.047	0.142	0.142	0.225	0.062	0.185
Number of Schools	24	24	24	24	24	24

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

### Hypothesis II: The Relationship Between Perceptions of Social Networking and Value of Education and Female Student Scores

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.466*** (0.029)		0.473*** (0.028)		0.608*** (0.025)
Value of education and doing well <sup>c</sup>	0.007 (0.034)	0.003 (0.030)	0.134*** (0.031)	0.0996*** (0.028)	0.0653** (0.032)	0.0595** (0.025)
Wasta <sup>c</sup>	0.023 (0.031)	0.005 (0.027)	0.017 (0.029)	0.015 (0.025)	0.0640** (0.029)	0.0211 (0.023)
Job Skills <sup>c</sup>	-0.0173 (0.033)	-0.00633 (0.029)	0.0029 (0.031)	0.00163 (0.027)	-0.0055 (0.031)	0.00616 (0.025)
Age (in years)	-0.159*** (0.042)	-0.0964** (0.038)	-0.0984** (0.039)	-0.0291 (0.035)	-0.178*** (0.040)	-0.0662** (0.032)
High School Graduation Confidence	0.219*** (0.065)	0.0859 (0.058)	0.188*** (0.060)	0.0693 (0.053)	0.316*** (0.062)	0.116** (0.049)

*Students' Educational Expectations*  
(reference category: will not finish high school)

College or university inside Qatar	0.13 (0.657)	-0.105 (0.583)	0.254 (0.613)	-0.0776 (0.537)	0.779 (0.627)	0.281 (0.491)
College or university outside Qatar	0.0123 (0.660)	-0.176 (0.585)	0.321 (0.616)	-0.0257 (0.539)	0.895 (0.629)	0.302 (0.493)
Work after high school	0.0265 (0.675)	-0.154 (0.599)	-0.151 (0.631)	-0.413 (0.552)	0.292 (0.644)	-0.0366 (0.504)
Have not decided yet	0.0771 (0.661)	-0.0866 (0.586)	0.189 (0.617)	-0.16 (0.540)	0.707 (0.630)	0.252 (0.493)

*Job Aspirations*  
(reference category: Military)

Teacher	0.141 (0.219)	0.185 (0.195)	0.131 (0.205)	-0.0741 (0.180)	0.0734 (0.209)	-0.0888 (0.164)
Lawyer	0.233 (0.210)	0.233 (0.186)	0.0554 (0.196)	-0.115 (0.172)	-0.149 (0.200)	-0.203 (0.157)
Medical	0.367* (0.218)	0.128 (0.194)	0.329 (0.204)	-0.11 (0.180)	0.379* (0.208)	0.0179 (0.164)
Scientist	0.424** (0.210)	0.298 (0.187)	0.194 (0.196)	-0.00721 (0.172)	0.113 (0.200)	-0.18 (0.157)
Businessman	0.194 (0.205)	0.150 (0.182)	0.139 (0.191)	-0.141 (0.168)	0.0902 (0.195)	-0.133 (0.153)
Have not decided yet	0.225 (0.202)	0.170 (0.179)	0.163 (0.188)	-0.0716 (0.166)	0.191 (0.193)	-0.0598 (0.151)
Government	0.183 (0.211)	0.186 (0.187)	0.094 (0.197)	-0.143 (0.173)	0.173 (0.201)	-0.0489 (0.158)
Semi-Government	-0.667 (0.560)	-0.75 (0.497)	-0.194 (0.523)	-0.121 (0.458)	-0.167 (0.534)	-0.308 (0.418)

*Hours Studying by Subject*

Math	-0.0291 (0.059)	0.0137 (0.053)	-0.0469 (0.055)	-0.0189 (0.049)	-0.0976* (0.056)	-0.0434 (0.044)
Science	0.117** (0.053)	0.0727 (0.047)	0.0732 (0.049)	0.0577 (0.043)	0.0954* (0.050)	0.0666* (0.039)
English	-0.0955 (0.063)	-0.106* (0.056)	-0.0837 (0.059)	-0.113** (0.052)	-0.0383 (0.060)	-0.027 (0.047)
Arabic	0.0323 (0.064)	0.0346 (0.057)	0.021 (0.060)	0.0638 (0.052)	-0.0365 (0.061)	0.0169 (0.048)
Others	-0.0312	-0.0583	-0.0357	-0.0193	0.019	0.0189

	(0.046)	(0.041)	(0.043)	(0.038)	(0.044)	(0.034)
How often do your parents help you with your homework?	-0.108***	-0.0811***	-0.114***	-0.0713***	-0.0739***	-0.0478**
	(0.026)	(0.023)	(0.024)	(0.021)	(0.024)	(0.019)
<i>Father's Employment Status</i>						
<i>(reference category: Governmental Sector)</i>						
Semi-Governmental Organization	0.0811	0.0424	0.00892	-0.0343	0.259***	0.157**
	(0.096)	(0.086)	(0.090)	(0.079)	(0.092)	(0.072)
Private Sector	0.0795	0.0484	0.0291	0.0459	0.224*	0.221**
	(0.121)	(0.107)	(0.112)	(0.098)	(0.115)	(0.090)
Other	-0.327*	-0.224	-0.0577	0.0653	0.0886	0.0519
	(0.179)	(0.159)	(0.167)	(0.147)	(0.171)	(0.134)
Unemployed	-0.0162	0.0236	0.186	0.18	0.183	0.117
	(0.194)	(0.172)	(0.181)	(0.159)	(0.185)	(0.145)
Retired	0.130*	0.0965	0.0346	0.0412	0.109	0.0774
	(0.072)	(0.064)	(0.067)	(0.059)	(0.068)	(0.054)
<i>Mother's Employment Status</i>						
<i>(reference category: Governmental Sector)</i>						
Semi-Governmental Organization	-0.374	-0.304	-0.345	-0.133	-0.14	-0.0361
	(0.228)	(0.202)	(0.213)	(0.186)	(0.217)	(0.170)
Private Sector	0.0853	0.0707	-0.205	0.024	0.0526	0.0252
	(0.199)	(0.177)	(0.186)	(0.164)	(0.190)	(0.149)
Other	-0.0153	-0.0495	-0.195	-0.127	-0.111	0.0651
	(0.146)	(0.130)	(0.137)	(0.120)	(0.139)	(0.109)
Housewife	0.0347	-0.0624	0.0557	0.00353	-0.0623	-0.0284
	(0.070)	(0.062)	(0.065)	(0.057)	(0.066)	(0.052)
Unemployed seeking job	-0.115	-0.154	0.0477	0.0559	-0.0652	0.00558
	(0.155)	(0.137)	(0.145)	(0.126)	(0.148)	(0.116)
Retired	0.138	0.0141	0.106	0.107	0.148*	0.0903
	(0.092)	(0.082)	(0.085)	(0.075)	(0.087)	(0.068)
<i>Student Grade Level</i>						
<i>(reference category: Grade 9)</i>						
Grade 10	-0.212	0.0165	1.594***	1.114**	-0.612	-0.24
	(0.913)	(0.810)	(0.606)	(0.531)	(0.871)	(0.681)
Grade 11	-0.0222	-0.0605	1.672***	0.908*	-0.449	-0.434
	(0.924)	(0.820)	(0.615)	(0.540)	(0.882)	(0.690)
Indicates 2013 score was used as prior score		-0.219		0.772*		-0.138

		(0.414)		(0.440)		(0.260)
Constant	2.206*	1.809	-0.285	-0.116	1.922	0.936
	(1.298)	(1.153)	(1.077)	(0.943)	(1.238)	(0.970)
Observations	1,011	1,011	1,015	1,015	1,014	1,014
R-squared	0.102	0.295	0.151	0.351	0.157	0.485
Number of Schools	19	19	19	19	19	19

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

### Hypothesis II: The Relationship Between Perceptions of Social Networking and Value of Education and All Student Scores

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.377***		0.360***		0.490***
		(0.021)		(0.020)		(0.020)
Value of education and doing well <sup>c</sup>	0.030	0.031	0.136***	0.108***	0.0379*	0.0379**
	(0.022)	(0.021)	(0.022)	(0.020)	(0.022)	(0.019)
Wasta <sup>c</sup>	0.002	-0.012	-0.022	-0.018	0.0395*	0.029
	(0.022)	(0.020)	(0.021)	(0.020)	(0.021)	(0.018)
Job Skills <sup>c</sup>	-0.007	-0.015	0.030	0.017	0.007	0.009
	(0.021)	(0.020)	(0.021)	(0.019)	(0.020)	(0.018)
Age (in years)	-0.107***	-0.0655**	-0.103***	-0.0514*	-0.0982***	-0.041
	(0.030)	(0.028)	(0.030)	(0.028)	(0.029)	(0.025)
High School Graduation Confidence	0.144***	0.0697*	0.188***	0.134***	0.193***	0.106***
	(0.039)	(0.037)	(0.038)	(0.036)	(0.038)	(0.033)
<i>Students' Educational Expectations</i> (reference category: will not finish high school)						
College or university inside Qatar	-0.052	-0.129	0.219	0.195	0.074	-0.033
	(0.146)	(0.135)	(0.143)	(0.132)	(0.140)	(0.121)
College or university outside Qatar	-0.049	-0.125	0.221	0.194	0.179	0.012
	(0.148)	(0.137)	(0.144)	(0.134)	(0.141)	(0.122)
Work after high school	-0.118	-0.151	0.076	0.086	-0.133	-0.200
	(0.161)	(0.149)	(0.157)	(0.146)	(0.154)	(0.133)
Have not decided yet	-0.090	-0.131	0.155	0.120	0.023	-0.089



	(0.152)	(0.140)	(0.148)	(0.138)	(0.145)	(0.126)
<i>Job Aspirations</i>						
<i>(reference category: Military)</i>						
Teacher	-0.037 (0.115)	-0.030 (0.106)	0.017 (0.112)	-0.006 (0.104)	-0.043 (0.110)	-0.024 (0.095)
Lawyer	-0.051 (0.093)	-0.094 (0.086)	-0.122 (0.091)	-0.127 (0.084)	-0.265*** (0.089)	-0.228*** (0.077)
Medical	0.154 (0.109)	-0.050 (0.101)	0.246** (0.106)	0.053 (0.099)	0.292*** (0.105)	0.132 (0.091)
Scientist	0.231*** (0.078)	0.118 (0.072)	0.056 (0.076)	0.030 (0.070)	0.063 (0.075)	0.004 (0.065)
Businessman	-0.029 (0.076)	-0.088 (0.071)	-0.041 (0.074)	-0.093 (0.069)	-0.074 (0.075)	-0.111* (0.065)
Have not decided yet	-0.026 (0.071)	-0.067 (0.066)	-0.002 (0.070)	-0.021 (0.065)	0.029 (0.069)	-0.032 (0.060)
Government	-0.001 (0.077)	-0.035 (0.072)	0.054 (0.075)	0.033 (0.070)	-0.012 (0.076)	-0.050 (0.065)
Semi-Government	-0.186 (0.327)	-0.204 (0.302)	-0.135 (0.320)	-0.126 (0.296)	-0.074 (0.312)	0.039 (0.270)
<i>Hours Studying by Subject</i>						
Math	-0.032 (0.038)	-0.021 (0.035)	-0.024 (0.037)	-0.012 (0.034)	-0.0661* (0.037)	-0.043 (0.032)
Science	0.0968*** (0.037)	0.0612* (0.034)	0.044 (0.036)	0.037 (0.033)	0.0768** (0.035)	0.050 (0.031)
English	-0.0831** (0.040)	-0.0829** (0.037)	-0.024 (0.039)	-0.027 (0.036)	-0.037 (0.038)	-0.024 (0.033)
Arabic	0.005 (0.039)	0.019 (0.036)	-0.021 (0.038)	0.003 (0.036)	-0.043 (0.038)	-0.017 (0.033)
Others	-0.043 (0.030)	-0.035 (0.027)	-0.046 (0.029)	-0.042 (0.027)	0.014 (0.029)	0.022 (0.025)
How often do your parents help you with your homework?	-0.0531*** (0.017)	-0.0314** (0.016)	-0.0784*** (0.017)	-0.0520*** (0.015)	-0.0424*** (0.016)	-0.0291** (0.014)
<i>Father's Employment Status</i>						
<i>(reference category: Governmental Sector)</i>						
Semi-Governmental Organization	0.046 (0.070)	0.039 (0.065)	-0.006 (0.068)	-0.004 (0.063)	0.140** (0.068)	0.104* (0.059)
Private Sector	0.028 (0.094)	0.003 (0.087)	0.026 (0.091)	0.073 (0.085)	0.125 (0.091)	0.159** (0.079)

Other	-0.240*	-0.116	-0.115	0.013	-0.124	-0.007
	(0.124)	(0.115)	(0.121)	(0.113)	(0.120)	(0.104)
Unemployed	-0.150	-0.167	0.039	0.033	-0.029	-0.060
	(0.151)	(0.140)	(0.144)	(0.133)	(0.141)	(0.122)
Retired	0.022	0.024	0.002	0.010	0.004	0.003
	(0.050)	(0.047)	(0.049)	(0.045)	(0.049)	(0.042)
<i>Mother's Employment Status</i>						
<i>(reference category: Governmental Sector)</i>						
Semi-Governmental Organization	-0.083	0.014	-0.026	0.032	-0.014	0.092
	(0.140)	(0.129)	(0.136)	(0.126)	(0.141)	(0.122)
Private Sector	0.013	0.041	-0.267*	-0.164	0.036	0.046
	(0.147)	(0.136)	(0.144)	(0.133)	(0.141)	(0.122)
Other	-0.003	0.018	-0.157*	-0.097	-0.186**	-0.026
	(0.088)	(0.081)	(0.086)	(0.080)	(0.085)	(0.074)
Housewife	-0.007	-0.048	0.043	0.021	-0.057	-0.027
	(0.051)	(0.047)	(0.049)	(0.046)	(0.049)	(0.042)
Unemployed seeking job	-0.114	-0.138	-0.001	-0.012	-0.100	-0.014
	(0.120)	(0.111)	(0.117)	(0.109)	(0.115)	(0.100)
Retired	0.083	0.013	0.105*	0.079	0.123**	0.067
	(0.065)	(0.060)	(0.063)	(0.059)	(0.063)	(0.054)
<i>Student Grade Level</i>						
<i>(reference category: Grade 9)</i>						
Grade 10	0.189***	0.143***	0.091	0.039	0.145***	0.0839*
	(0.057)	(0.053)	(0.055)	(0.051)	(0.055)	(0.047)
Grade 11	0.247***	0.132*	0.166**	-0.011	0.135*	-0.081
	(0.084)	(0.078)	(0.082)	(0.077)	(0.081)	(0.071)
Indicates 2013 score was used as prior score		0.242		1.021***		0.259
		(0.323)		(0.374)		(0.203)
Constant	1.444***	1.150**	1.113**	0.418	1.007*	0.445
	(0.551)	(0.511)	(0.537)	(0.500)	(0.527)	(0.457)
Observations	1,991	1,991	1,998	1,998	1,944	1,944
R-squared	0.055	0.195	0.098	0.227	0.085	0.316
Number of Schools	43	43	43	43	43	43

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

<b>Hypothesis III: The Relationship Between Civic Engagement and Male Student Scores</b>						
	<b>Math Score<sup>a</sup></b>		<b>Arabic Score<sup>a</sup></b>		<b>English Score<sup>a</sup></b>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.305*** (0.031)		0.283*** (0.029)		0.351*** (0.031)
Bonding Society <sup>c</sup>	-0.0322 (0.030)	-0.033 (0.028)	-0.0629** (0.029)	-0.0503* (0.028)	-0.0098 (0.029)	-0.0039 (0.027)
Bridging Society <sup>c</sup>	-0.011 (0.028)	-0.0176 (0.026)	0.130*** (0.027)	0.102*** (0.026)	0.0565** (0.027)	0.0474* (0.025)
Age (in years)	-0.0623 (0.045)	-0.0343 (0.043)	-0.135*** (0.045)	-0.0927** (0.043)	0.00055 (0.043)	0.0068 (0.040)
High School Graduation Confidence	0.0894* (0.050)	0.0442 (0.048)	0.188*** (0.050)	0.164*** (0.048)	0.0918* (0.048)	0.0659 (0.045)
<i>Students' Educational Expectations (reference category: will not finish high school)</i>						
College or university inside Qatar	-0.0439 (0.155)	-0.0843 (0.147)	0.189 (0.154)	0.171 (0.146)	0.0386 (0.147)	-0.0305 (0.137)
College or university outside Qatar	0.0586 (0.157)	-0.00945 (0.149)	0.144 (0.156)	0.126 (0.148)	0.164 (0.148)	0.0449 (0.139)
Work after high school	-0.0466 (0.174)	-0.0739 (0.165)	0.117 (0.172)	0.125 (0.164)	-0.0583 (0.164)	-0.124 (0.153)
Have not decided yet	-0.0291 (0.164)	-0.0757 (0.156)	0.121 (0.162)	0.0973 (0.154)	0.042 (0.155)	-0.0535 (0.145)
<i>Job Aspirations (reference category: Military)</i>						
Teacher	-0.0691 (0.296)	-0.0216 (0.282)	0.0729 (0.294)	0.0111 (0.280)	-0.0727 (0.279)	0.0646 (0.261)
Lawyer	-0.193 (0.176)	-0.374** (0.168)	-0.105 (0.172)	-0.182 (0.164)	-0.127 (0.163)	-0.275* (0.153)
Medical	0.196 (0.262)	0.0852 (0.249)	0.594** (0.259)	0.427* (0.247)	0.435* (0.246)	0.32 (0.230)
Scientist	0.232** (0.098)	0.154* (0.093)	0.0969 (0.097)	0.0643 (0.092)	0.158* (0.094)	0.162* (0.088)
Businessman	-0.0377 (0.106)	-0.0847 (0.101)	-0.14 (0.105)	-0.153 (0.100)	-0.0971 (0.108)	-0.113 (0.101)
Have not decided yet	-0.108 (0.093)	-0.108 (0.089)	-0.0787 (0.092)	-0.0739 (0.088)	0.00117 (0.090)	-0.0575 (0.084)
Government	0.0254	-0.0135	0.145	0.146	-0.0755	-0.0932

	(0.097)	(0.093)	(0.096)	(0.091)	(0.095)	(0.088)
Semi-Government	0.111	0.205	-0.0597	-0.137	0.0411	0.163
	(0.417)	(0.397)	(0.413)	(0.394)	(0.392)	(0.367)
<i>Hours Studying by Subject</i>						
Math	-0.0204	-0.0209	-0.04	-0.0316	-0.0559	-0.0529
	(0.051)	(0.049)	(0.050)	(0.048)	(0.049)	(0.046)
Science	0.0896*	0.0599	0.0191	0.0148	0.0554	0.0389
	(0.054)	(0.051)	(0.053)	(0.051)	(0.051)	(0.048)
English	-0.0816	-0.0773	0.0233	0.0285	-0.0363	-0.0189
	(0.053)	(0.050)	(0.052)	(0.050)	(0.051)	(0.048)
Arabic	-0.0101	0.0022	-0.0358	-0.0234	-0.0371	-0.0338
	(0.051)	(0.049)	(0.051)	(0.048)	(0.049)	(0.046)
Others	-0.0516	-0.0245	-0.0562	-0.0512	0.0143	0.0284
	(0.040)	(0.038)	(0.039)	(0.038)	(0.038)	(0.035)
How often do your parents help you with your homework?	-0.00793	0.00815	-0.0472**	-0.0306	-0.013	-0.0112
	(0.023)	(0.022)	(0.023)	(0.022)	(0.022)	(0.021)
<i>Father's Employment Status</i>						
<i>(reference category: Governmental Sector)</i>						
Semi-Governmental Organization	0.0066	0.0135	-0.0108	0.0103	-0.0235	-0.00842
	(0.104)	(0.099)	(0.103)	(0.098)	(0.102)	(0.096)
Private Sector	-0.0575	-0.0898	0.068	0.147	-0.0478	0.0469
	(0.153)	(0.145)	(0.152)	(0.144)	(0.152)	(0.142)
Other	-0.123	-0.0136	0.000377	0.119	-0.275	-0.0919
	(0.177)	(0.168)	(0.175)	(0.167)	(0.170)	(0.160)
Unemployed	-0.277	-0.375	-0.039	-0.0895	-0.134	-0.238
	(0.250)	(0.237)	(0.232)	(0.221)	(0.220)	(0.210)
Retired	-0.0509	-0.0428	0.0292	0.0288	-0.0893	-0.0721
	(0.072)	(0.068)	(0.071)	(0.068)	(0.070)	(0.065)
<i>Mother's Employment Status</i>						
<i>(reference category: Governmental Sector)</i>						
Semi-Governmental Organization	0.0479	0.117	0.0833	0.0712	0.103	0.16
	(0.179)	(0.171)	(0.178)	(0.169)	(0.185)	(0.173)
Private Sector	0.0264	0.0837	-0.328	-0.325	0.0729	0.0927
	(0.224)	(0.213)	(0.222)	(0.212)	(0.212)	(0.198)
Other	0.00269	0.0416	-0.0878	-0.0488	-0.186*	-0.0787
	(0.112)	(0.107)	(0.111)	(0.106)	(0.108)	(0.101)
Housewife	-0.0387	-0.0398	0.0365	0.031	-0.0357	-0.0181
	(0.075)	(0.071)	(0.074)	(0.071)	(0.073)	(0.068)
Unemployed seeking job	-0.0396	-0.0908	-0.146	-0.179	-0.11	-0.018
	(0.194)	(0.184)	(0.192)	(0.183)	(0.186)	(0.174)

Retired	0.0174 (0.094)	-0.0339 (0.089)	0.0912 (0.092)	0.0525 (0.088)	0.123 (0.090)	0.0693 (0.084)
<i>Student Grade Level</i> (reference category: Grade 9)						
Grade 10	0.100 (0.083)	0.0807 (0.080)	-0.237*** (0.082)	-0.306*** (0.079)	-0.0387 (0.080)	-0.086 (0.075)
Grade 11	0.0606 (0.118)	0.085 (0.113)	-0.101 (0.117)	-0.210* (0.112)	-0.185 (0.113)	-0.250** (0.106)
Indicates 2013 score was used as prior score		0.874* (0.510)		0.96 (0.620)		0.581* (0.314)
Constant	0.727 (0.791)	0.39 (0.760)	1.697** (0.784)	1.047 (0.751)	-0.245 (0.752)	-0.186 (0.704)
Observations	981	981	985	985	931	931
R-squared	0.046	0.141	0.139	0.222	0.065	0.186
Number of Schools	24	24	24	24	24	24

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

<b>Hypothesis III: The Relationship Between Civic Engagement and Female Student Scores</b>						
	<b>Math Score<sup>a</sup></b>		<b>Arabic Score<sup>a</sup></b>		<b>English Score<sup>a</sup></b>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.465*** (0.029)		0.465*** (0.028)		0.603*** (0.025)
Bonding Society <sup>c</sup>	-0.0639* (0.037)	-0.014 (0.033)	-0.115*** (0.034)	-0.0670** (0.030)	-0.106*** (0.035)	-0.031 (0.028)
Bridging Society <sup>c</sup>	-0.0244 (0.037)	-0.0182 (0.033)	0.128*** (0.034)	0.0435 (0.031)	0.0978*** (0.035)	0.0492* (0.028)
Age (in years)	-0.162*** (0.042)	-0.0979*** (0.038)	-0.0927** (0.039)	-0.0271 (0.035)	-0.178*** (0.040)	-0.0664** (0.032)
High School Graduation Confidence	0.208*** (0.064)	0.0847 (0.058)	0.180*** (0.060)	0.0707 (0.053)	0.297*** (0.061)	0.119** (0.049)
<i>Students' Educational Expectations</i> (reference category: will not finish high school)						
College or university inside Qatar	0.0584 (0.655)	-0.117 (0.581)	0.274 (0.608)	-0.0289 (0.537)	0.69 (0.622)	0.303 (0.490)

College or university outside Qatar	-0.047 (0.658)	-0.186 (0.584)	0.327 (0.611)	0.0124 (0.540)	0.816 (0.625)	0.322 (0.492)
Work after high school	-0.0348 (0.673)	-0.166 (0.598)	-0.0809 (0.625)	-0.345 (0.552)	0.251 (0.640)	0.00209 (0.503)
Have not decided yet	0.0108 (0.659)	-0.098 (0.586)	0.174 (0.613)	-0.138 (0.541)	0.614 (0.627)	0.261 (0.493)
<i>Job Aspirations</i>						
<i>(reference category: Military)</i>						
Teacher	0.133 (0.218)	0.185 (0.194)	0.156 (0.202)	-0.0502 (0.179)	0.0578 (0.207)	-0.0825 (0.163)
Lawyer	0.217 (0.208)	0.232 (0.185)	0.0637 (0.194)	-0.0967 (0.171)	-0.189 (0.198)	-0.203 (0.156)
Medical	0.329 (0.217)	0.126 (0.193)	0.3 (0.202)	-0.0969 (0.180)	0.281 (0.206)	0.00797 (0.163)
Scientist	0.398* (0.209)	0.295 (0.185)	0.208 (0.194)	0.0138 (0.171)	0.0605 (0.198)	-0.183 (0.156)
Businessman	0.171 (0.203)	0.147 (0.181)	0.141 (0.189)	-0.125 (0.167)	0.0392 (0.193)	-0.136 (0.152)
Have not decided yet	0.209 (0.200)	0.168 (0.178)	0.166 (0.186)	-0.0653 (0.165)	0.162 (0.190)	-0.0608 (0.150)
Government	0.156 (0.210)	0.183 (0.186)	0.111 (0.195)	-0.118 (0.172)	0.128 (0.199)	-0.044 (0.157)
Semi-Government	-0.753 (0.559)	-0.776 (0.497)	-0.21 (0.520)	-0.15 (0.458)	-0.256 (0.531)	-0.322 (0.418)
<i>Hours Studying by Subject</i>						
Math	-0.0238 (0.059)	0.0147 (0.053)	-0.0398 (0.055)	-0.0146 (0.049)	-0.0843 (0.056)	-0.0385 (0.044)
Science	0.108** (0.052)	0.0723 (0.047)	0.0792 (0.049)	0.0681 (0.043)	0.0777 (0.050)	0.0666* (0.039)
English	-0.093 (0.063)	-0.106* (0.056)	-0.067 (0.058)	-0.105** (0.052)	-0.0287 (0.060)	-0.0235 (0.047)
Arabic	0.0369 (0.064)	0.035 (0.057)	0.0317 (0.059)	0.0669 (0.053)	-0.0283 (0.061)	0.018 (0.048)
Others	-0.0292 (0.046)	-0.0579 (0.041)	-0.0398 (0.043)	-0.0221 (0.038)	0.0182 (0.044)	0.0164 (0.034)
How often do your parents help you with your homework?	-0.109*** (0.026)	-0.0812*** (0.023)	-0.117*** (0.024)	-0.0734*** (0.021)	-0.0778*** (0.024)	-0.0493*** (0.019)
<i>Father's Employment Status</i>						
<i>(reference category: Governmental Sector)</i>						

Semi-Governmental Organization	0.0774 (0.096)	0.0417 (0.086)	0.0118 (0.089)	-0.0302 (0.079)	0.258*** (0.091)	0.160** (0.072)
Private Sector	0.0737 (0.121)	0.0466 (0.107)	0.0138 (0.111)	0.0348 (0.098)	0.218* (0.114)	0.217** (0.090)
Other	-0.330* (0.178)	-0.228 (0.159)	-0.0612 (0.166)	0.0482 (0.146)	0.0868 (0.169)	0.0438 (0.133)
Unemployed	-0.0072 (0.194)	0.0271 (0.172)	0.187 (0.180)	0.184 (0.159)	0.171 (0.184)	0.111 (0.145)
Retired	0.120* (0.072)	0.0949 (0.064)	0.0098 (0.067)	0.0283 (0.059)	0.0777 (0.068)	0.0658 (0.054)
<i>Mother's Employment Status</i> (reference category: Governmental Sector)						
Semi-Governmental Organization	-0.366 (0.227)	-0.308 (0.202)	-0.323 (0.211)	-0.144 (0.187)	-0.0878 (0.216)	-0.0285 (0.170)
Private Sector	0.104 (0.199)	0.0748 (0.177)	-0.17 (0.185)	0.0376 (0.164)	0.0919 (0.189)	0.038 (0.149)
Other	-0.0118 (0.146)	-0.048 (0.130)	-0.198 (0.135)	-0.131 (0.120)	-0.113 (0.139)	0.0615 (0.109)
Housewife	0.0365 (0.069)	-0.0614 (0.062)	0.067 (0.064)	0.0144 (0.057)	-0.0529 (0.066)	-0.0204 (0.052)
Unemployed seeking job	-0.127 (0.154)	-0.156 (0.137)	0.0447 (0.143)	0.056 (0.127)	-0.0716 (0.147)	0.00845 (0.116)
Retired	0.142 (0.091)	0.0146 (0.082)	0.122 (0.085)	0.115 (0.075)	0.164* (0.087)	0.0955 (0.068)
<i>Student Grade Level</i> (reference category: Grade 9)						
Grade 10	0.270*** (0.079)	0.201*** (0.070)	0.401*** (0.073)	0.387*** (0.065)	0.271*** (0.075)	0.245*** (0.059)
Grade 11	0.477*** (0.124)	0.128 (0.112)	0.481*** (0.115)	0.181* (0.103)	0.461*** (0.117)	0.0591 (0.094)
Indicates 2013 score was used as prior score		-0.202 (0.412)		0.716 (0.440)		-0.119 (0.261)
Constant	1.880* (0.986)	1.666* (0.877)	0.724 (0.916)	0.464 (0.809)	1.181 (0.937)	0.401 (0.738)
Observations	1,010	1,010	1,013	1,013	1,013	1,013
R-squared	0.104	0.295	0.156	0.345	0.164	0.484
Number of Schools	19	19	19	19	19	19

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.

**Hypothesis III: The Relationship Between Civic Engagement and All Student Scores**

	Math Score <sup>a</sup>		Arabic Score <sup>a</sup>		English Score <sup>a</sup>	
	Model I	Model II	Model I	Model II	Model I	Model II
Prior Score <sup>b</sup>		0.376*** (0.021)		0.354*** (0.020)		0.486*** (0.020)
Bonding Society <sup>c</sup>	-0.0447** (0.023)	-0.034 (0.021)	-0.0855*** (0.022)	-0.0600*** (0.021)	-0.0546** (0.022)	-0.0282 (0.019)
Bridging Society <sup>c</sup>	-0.0055 (0.022)	-0.0144 (0.020)	0.146*** (0.021)	0.0989*** (0.020)	0.0853*** (0.021)	0.0582*** (0.018)
Age (in years)	-0.108*** (0.030)	-0.0685** (0.028)	-0.103*** (0.029)	-0.0526* (0.028)	-0.0978*** (0.029)	-0.0414 (0.025)
Q.10 HS Graduation Confidence	0.143*** (0.039)	0.0726** (0.036)	0.196*** (0.038)	0.143*** (0.036)	0.180*** (0.038)	0.102*** (0.033)
<i>Q.12 Students' Educational Expectations (reference category: will not finish high school)</i>						
College or university inside Qatar	-0.023 (0.146)	-0.0958 (0.135)	0.233 (0.142)	0.217 (0.132)	0.0405 (0.139)	-0.0453 (0.121)
College or university outside Qatar	-0.0198 (0.148)	-0.092 (0.137)	0.216 (0.144)	0.202 (0.134)	0.141 (0.141)	-0.00303 (0.122)
Work after high school	-0.089 (0.161)	-0.122 (0.149)	0.0688 (0.157)	0.0889 (0.146)	-0.158 (0.153)	-0.211 (0.133)
Have not decided yet	-0.0713 (0.152)	-0.109 (0.141)	0.124 (0.148)	0.108 (0.138)	-0.0133 (0.145)	-0.105 (0.126)
<i>Q.13 Job Aspirations (reference category: Military)</i>						
Teacher	-0.0307 (0.115)	-0.0249 (0.106)	0.048 (0.112)	0.0183 (0.104)	-0.0329 (0.110)	-0.0143 (0.095)
Lawyer	-0.0477 (0.093)	-0.0891 (0.086)	-0.111 (0.090)	-0.116 (0.084)	-0.272*** (0.089)	-0.228*** (0.077)
Medical	0.151 (0.109)	-0.0427 (0.101)	0.243** (0.106)	0.0634 (0.099)	0.253** (0.104)	0.117 (0.091)
Scientist	0.234***	0.125*	0.0864	0.0559	0.0514	0.00244



	(0.077)	(0.071)	(0.075)	(0.070)	(0.074)	(0.064)
Businessman	-0.0269	-0.0824	-0.0242	-0.0768	-0.0784	-0.109*
	(0.076)	(0.070)	(0.074)	(0.069)	(0.075)	(0.065)
Have not decided yet	-0.0201	-0.06	0.0154	-0.0054	0.0318	-0.0275
	(0.071)	(0.066)	(0.069)	(0.064)	(0.069)	(0.060)
Government	0.00161	-0.0324	0.0734	0.0501	-0.0115	-0.044
	(0.077)	(0.071)	(0.075)	(0.070)	(0.075)	(0.065)
Semi-government	-0.197	-0.203	-0.0673	-0.0732	-0.0765	0.0406
	(0.327)	(0.302)	(0.318)	(0.296)	(0.311)	(0.270)
<i>Q.28 Hours by Subject</i>						
Math	-0.0215	-0.013	-0.014	-0.0041	-0.0585	-0.0387
	(0.038)	(0.035)	(0.037)	(0.034)	(0.037)	(0.032)
Science	0.0958***	0.0627*	0.0336	0.0305	0.0646*	0.0441
	(0.037)	(0.034)	(0.036)	(0.034)	(0.035)	(0.031)
English	-0.0792**	-0.0800**	-0.0207	-0.0262	-0.033	-0.0236
	(0.040)	(0.037)	(0.039)	(0.036)	(0.038)	(0.033)
Arabic	0.00735	0.0206	-0.0108	0.00932	-0.0379	-0.0147
	(0.039)	(0.036)	(0.038)	(0.036)	(0.038)	(0.033)
Others	-0.043	-0.0358	-0.0435	-0.04	0.0169	0.0231
	(0.030)	(0.027)	(0.029)	(0.027)	(0.028)	(0.025)
Q.29 How often do your parents help you with your homework?	-0.0515***	-0.0298*	-0.0813***	-0.0539***	-0.0466***	-0.0314**
	(0.017)	(0.016)	(0.017)	(0.015)	(0.016)	(0.014)
<i>Father's Employment Status (reference category: Governmental Sector)</i>						
Semi-governmental Organization	0.0484	0.0426	-0.0078	-0.0032	0.137**	0.104*
	(0.070)	(0.065)	(0.068)	(0.063)	(0.068)	(0.059)
Private Sector	0.0263	-0.001	0.0287	0.0729	0.134	0.164**
	(0.094)	(0.087)	(0.091)	(0.085)	(0.091)	(0.079)
Other	-0.229*	-0.109	-0.0838	0.0325	-0.11	-0.00103
	(0.124)	(0.115)	(0.121)	(0.113)	(0.119)	(0.104)
Unemployed	-0.133	-0.154	0.0509	0.0397	-0.0209	-0.0561
	(0.151)	(0.140)	(0.144)	(0.134)	(0.140)	(0.122)
Retired	0.0217	0.0246	0.00194	0.0107	-0.0034	-2.790E-05
	(0.050)	(0.046)	(0.049)	(0.045)	(0.048)	(0.042)
<i>Mother's Employment Status (reference category: Governmental Sector)</i>						
Semi-governmental Organization	-0.097	-0.0052	-0.0305	0.0209	0.00447	0.1
	(0.140)	(0.129)	(0.136)	(0.126)	(0.140)	(0.122)

Private Sector	0.0133 (0.147)	0.0431 (0.136)	-0.264* (0.143)	-0.164 (0.133)	0.0357 (0.140)	0.0439 (0.121)
Other	-0.0027 (0.088)	0.0191 (0.081)	-0.133 (0.086)	-0.0811 (0.080)	-0.175** (0.085)	-0.021 (0.074)
Housewife	-0.0094 (0.051)	-0.0496 (0.047)	0.0431 (0.049)	0.0209 (0.046)	-0.057 (0.049)	-0.0255 (0.042)
Unemployed seeking job	-0.121 (0.120)	-0.145 (0.111)	-0.0135 (0.117)	-0.0215 (0.109)	-0.101 (0.115)	-0.0131 (0.100)
Retired	0.077 (0.065)	0.00457 (0.060)	0.0999 (0.063)	0.0723 (0.059)	0.134** (0.062)	0.0745 (0.054)
<i>Student Grade Level</i> (reference category: Grade 9)						
Grade 10	0.190*** (0.057)	0.144*** (0.053)	0.0935* (0.055)	0.0416 (0.051)	0.145*** (0.054)	0.0855* (0.047)
Grade 11	0.248*** (0.084)	0.136* (0.078)	0.173** (0.082)	-0.0028 (0.077)	0.139* (0.081)	-0.0764 (0.071)
Indicates 2013 score was used as prior score		0.264 (0.322)		0.891** (0.373)		0.247 (0.203)
Constant	1.410** (0.548)	1.122** (0.508)	1.049** (0.532)	0.362 (0.498)	1.078** (0.523)	0.469 (0.454)
Observations	1,991	1,991	1,998	1,998	1,944	1,944
R-squared	0.056	0.196	0.104	0.226	0.091	0.318
Number of Schools	43	43	43	43	43	43

These are the regression results with the effects of all control variables shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

<sup>a</sup> Measure has been standardized to have mean 0 and SD 1.

<sup>b</sup> Standardized test score for 2014 and 2013 with mean 0 and SD 1.

<sup>c</sup> A standardized factor variable with mean 0 and SD 1 derived from estimating factor scores.