



**Grit and the Uphill Climb: Computer Science
Entrepreneur:**

Mahrukh Qadeer

This case was written by Professor Amanda Bullough and her graduate student, Aynsley Dunham, at the University of Delaware. It is intended to be used as the basis of class discussion rather than to illustrate either effective or ineffective handling of a management situation. The case was compiled from published sources and interviews with the business leader.

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Abstract

Mahrukh Qadeer is a female entrepreneur in Pakistan working in the field of computer science. Pakistani cultural norms can be restricting for women, often limiting them to maintaining the home and caring for children or working in the garment industry. Moreover, computer science is a typically male-dominated field, even in cultures without such restrictions on women's activities. This case explains how Mahrukh overcame these cultural norms and the challenges she faced while forging her career.

Learning Outcomes

By the end of this case study, the students should be able to:

- Understand how cultural norms can affect Pakistani women's careers.
- Identify how Pakistani women can overcome cultural expectations to have careers.
- Appreciate the importance of grit and resilience for women leaders running businesses in male-dominated careers or working in cultures with limited gender norm expectations.

Mahrukh's Professional Beginnings

Mahrukh Qadeer is an entrepreneur and small business owner in Lahore, Pakistan. Her career has largely been in the field of computer science, more specifically in mobile and web apps, as Mahrukh worked for companies producing such products before becoming an entrepreneur. Although she had always wanted a career in computer science and is now successful, Mahrukh needed to work around social norms and expectations to get to where she is today.

It is well known that computer science, computer programming, and other S.T.E.M. (science, technology, engineering, and mathematics) occupations are male-dominated fields. For example, in the United States, only 20% of computer science professionals are women. ("Women in Computer Science," 2020) In Pakistan, women comprise less than 10% of all engineering or technology occupations. ("Women Employment," n.d.) The reason for such low levels of female engagement in Pakistani S.T.E.M. fields is easy to identify but hard to overcome Culture.

In Pakistan, cultural norms limit women's ability to work, the fields women can work in, and women's access to education. Traditionally, in large parts of the country, a woman is seen as subject to the authority of the men in her life, first her father and then her husband. It can also be considered by some to be "dishonorable" for a woman to interact with men she is not related to in many circles, and so her autonomy is limited to protect her and her family's reputation. These cultural norms have created situations where women have been limited to the home to prevent interactions with the opposite sex, and men have typically dominated all spheres of society outside the home. (Amir & Durrani, 2018; Shah, 2018) As such, women's education is not a priority in



Pakistan: Less than half of Pakistani women have attended school, and only 10% of women have post-secondary education. Only 26% of the workforce is comprised of women, with under 1% of entrepreneurs in Pakistan being women. Women more often work in unskilled or low-skilled jobs from home while being 10 times more involved in household upkeep, childcare, and eldercare than men. (Quresh, 2019)

Not all of Pakistan is affected by such restricting gender roles. There are areas of the country where women experience much parity with men. Fortunately for Mahrukh, her parents did not believe in placing such restrictions upon her. Her father, a retired judge, and a successful businessman, firmly believed that everyone in his family should be encouraged to learn and have access to education. He was happy when Mahrukh wanted to go to college and gave permission readily. However, that was not enough for Mahrukh. She wanted her education to mean something, so she made her father and mother promise that she would be allowed to have a career following her graduation. When she was 17, she even had her parents document in writing that she had their permission to work, although the document was not legal and held only symbolic value.

The symbolic value was enough for Mahrukh. She enrolled in the National University of Computer and Emerging Sciences in Pakistan, a co-educational school that taught both men and women. Some of her extended family objected due to the co-educational setup of the school, deeming it inappropriate for Mahrukh to study with men, but her father did not care and allowed her to continue studying. Within a few years, Mahrukh graduated with both her Bachelor's degree and a Master's degree in Computer Science and later went on to secure entrepreneurship training as well.¹

Starting Her Career

After obtaining her graduate degree in 2007, Mahrukh worked for several technology companies. From 2007 to 2010, she worked at Offerpal Media and Cambridge Docs as a Principal Software Quality Assurance Engineer. Then, from 2010 to 2014, she worked at Gameview Studios as a Quality Assurance and Project Manager and later as Product Manager. (Qadeer, n.d.) When Mahrukh was working in game development, her managers recognized her talent during her 4 years at the company. Her supervisor even wanted to promote her to the position of Director, but Mahrukh felt she needed to turn the promotion down.

Mahrukh knew she did not want to stay at Gameview for her entire career and had considered moving on for some time. She knew, however, that the higher her position at Gameview when

¹ WomenX: Multiplying the Power of Women Entrepreneurs in Pakistan. Retrieved October 2020: <https://www.worldbank.org/en/news/feature/2018/11/01/womenx-multiplying-the-power-of-women-entrepreneurs-in-pakistan>



she left, the harder it would be for her to be hired elsewhere. Similarly, no company would have hired her for a lower position that she was overqualified for, which made it nearly impossible for her to make a career switch if she wanted to keep working for established companies. If she had accepted the promotion to Director, Mahrukh felt she would have essentially locked herself into working for Gameview for the entirety of her career, and she did not want to put herself in that position.

Mahrukh had another reason for not accepting the director position: She had intended to leave her job at Gameview since 2011 when she took an entrepreneurship course at King's College in London. The course inspired her creativity, and she has been mulling over ideas for her company since. It was not until 2014 that she finally felt it was the right time to leave Gameview to begin her ventures. Throughout her years at Gameview, she had taken on increasingly more responsibility and regularly worked 50-hour weeks.

In 2014, her father became ill, and her long work hours prevented her from spending time with her family or helping with her father's care. Mahrukh's family began pressuring her to leave for the sake of her family—and Mahrukh felt so burnt out from the long hours of work that she finally felt it was time to leave the company.

Becoming an Entrepreneur

After leaving Gameview Studios in 2014, Mahrukh began freelancing, teaching as a visiting professor at the Beaconhouse National University in Lahore, and dabbled in the fashion industry. Mahrukh had briefly explored exporting clothes to Canada but quickly found that it was not for her. Mahrukh received a lot of positive feedback and encouragement, even pressure, from her friends and colleagues about going into business in fashion. This was upsetting to Mahrukh, though, knowing that her achievements, skills, and hard work as a software engineer were overlooked due to her gender. She felt it was their way of telling her that, as a woman, working in the clothing industry was all she could or should do.

She ignored the pressure to enter the garment industry and went to Silicon Valley for a technology venture launch program before officially jumping into entrepreneurship. She wanted to prove to herself that she could do it. She went to this program with two business ideas and quickly homed in on one. As part of the program, she was selected among the top six students to give a pitch to a group of experts from Stanford, NASA, and other well-known organizations. She received helpful feedback and recruited an official advisor from Silicon Valley with business development expertise, who worked with her on her ideas for the next two years. She officially founded Mahir in 2016 with several long-term friends.

Mahir was founded to serve as a local guide for real word-of-mouth on everything from restaurants and mechanics to handymen. It was an artificial intelligence-based recommendation



system that connected people with local businesses. She incubated Mahir at LUMS Center for Entrepreneurship, one of the best programs in Pakistan. LUMS had equity in Mahir. Mahrukh was inspired to create this because she noticed how difficult it was for people to find tradesmen when they had a problem with plumbing, electrical wiring, etc. There was no directory, so without her app, everything used to be done by word of mouth. This also made it hard for tradesmen to obtain clients. Moreover, a lack of licensing boards or agencies in Pakistan meant that anyone could claim to be skilled in a trade, even if they needed to be qualified to do the work. Mahrukh knew she could fill this gap through her company.

The bootstrapped activity-based platform could garner about 2000 businesses and 30,000 users but need more revenue to survive. However, it did not deter her from taking risks and starting another venture.

Co-Wired

In April 2017, Mahrukh also opened a second company: Co-Wired. (Qadeer, n.d.) Co-Wired is a shared workspace where companies and individuals can buy passes to use as needed. The co-working space is located in downtown Lahore and provides meeting and conference rooms with state-of-the-art visual-audio equipment, Wi-Fi, and an office kitchen. It was also designed with the safety of female workers in mind, with on-site security personnel and video monitoring (“Co-Wired,” n.d.).

Co-Wired is a communal workspace with an ideology identified in its slogan – Create, Communicate, Collaborate. Having struggled to find a reasonable office to house her first-ever startup, Mahrukh wanted Co-Wired to act as a starting point for entrepreneurs to lay the first brick of their idea without worrying about workspace issues.

As an entrepreneur, she knew it was imperative to focus on the idea, the product, and the customer to get traction and generate revenue. Setting up an office, furniture, light fixtures, internet connection, a generator for power backup, and utilities should not consume an entrepreneur’s energy or eat up their limited budget.

She also wanted a female-friendly office space, so she and her team were particular about developing an inclusive space tailored to women’s needs and safe at any time of the day. She opened the workspace in a corporate building with easy access in the center of Lahore. The space is secure from the parking to the building, and it is wheelchair accessible.

Co-Wired also designed special packages for mom entrepreneurs to help them focus on their ventures in the limited time they get from their motherly duties. The Kids Entrepreneurship Bootcamp allows children to develop and implement their entrepreneurial skills.



In the past 4 years, Co-Wired has supported the entrepreneurial ecosystem by conducting training programs and connecting its members to resources, support networks, and mentors. Workshops and vocational training are conducted on topics like Growth, Hacking, Website development, Videography, Design Thinking, and Social Media Marketing Certification. Hosting entrepreneurship-related discussion sessions is also a regular practice at Co-Wired, where various professions like healthcare, finance, music, and media are discussed in the context of technology and consumer behavior.

Like any business, Co-Wired has experienced challenges, the biggest being the COVID-19 pandemic. In the company's 3rd year, at the start of 2020, Co-Wired was at full capacity, particularly popular with small and medium-sized companies because of its executive interior and event space, which was completely booked months in advance. In March 2020, COVID-19 struck, and the government of Pakistan announced a lockdown across the country. This pushed entire companies to work from home and decimated entire supply chains as video conference meetings took over the world. Pre-pandemic, one of the most significant benefits of co-working spaces was the interaction and sense of community they provided.

Co-Wired closed for almost two months, from March to May 2020, and began offering as much as 50% discounts on monthly rent and pivoted their offerings. As things settled, the company leaders shifted their event rosters online and conducted several pieces of training, workshops, and fireside chats in a virtual space. By using technology effectively, networking has continued to thrive in this new environment. While the world went into lockdown, closing shops and businesses, Co-Wired amped up the collaborations to mobilize and boost businesses, especially those owned by women. The pandemic became the best time to learn new skills. Co-Wired needed to retrofit the workplace according to health guidelines for physical distancing to bring people back to work as quickly and safely as possible.

Co-Wired also became an ideation and execution partner of the first-ever Entrepreneurship Challenge held in collaboration with a women entrepreneurs' organization. They had mentors and judges from 6 countries, including Australia, Canada, Bangladesh, the United Kingdom, the Philippines, and Pakistan. It was the first entrepreneurship challenge in Pakistan that women designed for women who were mentored, judged, and sponsored by women. Co-Wired also collaborated with various local and international organizations, including Startup Grind and National Productivity Organization Pakistan, to bring industry experts for training sessions.

Where Mahrukh is Now

As of July 2020, Mahrukh is still running Co-Wired. She closed Mahir in September 2018 because it turned out not to be profitable due to the complexity of the business model. She is a tech consultant for US-based clients and provides technical assistance during the pre-sales process by identifying customers' technical and business requirements. She is also a facilitator for the British



Council's Dice Fellowship. (Qadeer, n.d.) Additionally, she volunteered as Head of Partnerships at Startup Grind's Lahore Chapter, which is a network of startups, entrepreneurs, innovators, and creators across the world organized by local chapters that hold events focused on a variety of business topics ("Lahore: Startup Grind," n.d.).

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