

**The Rising Young Saudi Entrepreneur Generation:  
An Empirical Analysis of the Role of Gender in the Rapid Growth of the KSA Small Business  
Ecosystem**

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## ABSTRACT

Based on a national survey (N=3,518) of college-educated Saudis from 19-29 years old, this chapter examines the sharp rise of young Saudi entrepreneurs through a unique, multidimensional *Propensity for Entrepreneurship (PjE)* © attitudinal scale. It differentiates four entrepreneurial groups (“Samurai,” “Traditional,” “Reluctant,” “Ambivalent”) from salaried employees and domestic household groups. Rigorously evaluated by Principal Components Analysis (PCA), this empirical taxonomy explicitly recognizes the interplay between macro-economic fluctuations, labor market participation, and changing social norms towards marriage. The empirical results illustrate the distinctiveness of these four groups as they pursue their business goals and struggle with employment security. Furthermore, the data reveal that young Saudi women (N=2,448) aspire to salaried employment and entrepreneurship at rates comparable to men while actively resisting traditional gender roles. This reflects changing Saudi social norms as well as the double-financial burden of young Saudi Males (N=1,070) who must save money for small business ventures as well as for their future marriage expenses (dowry, wedding, household furnishings). That is, the intensifying financial pressures experienced by young Saudi men requires prioritizing their salaried work and entrepreneurial aspirations over the social expectations of early marriage. This has created an historically unprecedented “free” social space for young (single) Saudi women to pursue higher education, work careers, and entrepreneurial activities before establishing their matrimonial households in their mid-to-late 20s—five to ten years later than their mothers. This trend suggests that the dramatic increase of young, college-educated Female workers and entrepreneurs will profoundly impact the growth and diversification of the Saudi services sector with its low start-up capital requirements.

*Key Words:* MENA Female Entrepreneurs, Islamic Marriage Dowries, Propensity for Entrepreneurship scale, Saudi Small Business Ecosystem, Saudi Entrepreneur Generation

## **The Rising Young Saudi Entrepreneur Generation:**

### **An Empirical Analysis of the Role of Gender in the Rapid Growth of the KSA Small Business Ecosystem**

#### **INTRODUCTION**

The pivotal role of Entrepreneurship in economic development is widely recognized for its profound impact on economic growth, job creation, and social transformations. This is especially important to energy rich countries in the Middle East and North Africa (MENA) region. They must negotiate the difficult transition from inefficient and stagnant state managed economies, with bloated government bureaucracies, to nurturing the rise of a dynamic, private commercial sector that is characterized by innovation, labor efficiency, and risk-taking. Recent scholarly research highlights the social and cultural factors that influence entrepreneurial behavior, particularly among youth and women. These issues are especially relevant to the Kingdom of Saudi Arabia (KSA) where national development strategies, demographic pressures, and Western gender roles have converged to create a unique environment for incubating entrepreneurial aspirations (cf. Badghish, et al, 2023; Hakami, 2021; Khan and Khan, 2020; Koelbl, 2020; Eum, 2019; Manning, 2018; Forster, 2017).

Over the last decade of rapid societal transformation, Saudi Arabia has swiftly diversified its economic base beyond the traditional dependence on extractive oil resources and refined petroleum products (Al Naimi, 2022; Saikali, 2022; Hope and Scheck, 2021; Hubbard, 2021; Rundell, 2021; Koelbl, 2020; Wald, 2018; Al Darwish, 2014; Rahman, 2014). In fact, Saudi Arabia's highly diversified Public Investment (Sovereign) Fund has soared from \$595.6 billion in 2022 to nearly \$1 trillion at the end of 2024—second only to the Abu Dhabi Investment Authority in the Gulf region (Arab News, 2024). In this context, the Saudi government's promotion and financial support of Entrepreneurship has emerged as a crucial catalyst for sustainable, organic growth as driven by urbanization, higher education, female labor force participation, and Small and Medium-Sized Enterprises (SME). Today, successful businesspeople are revered as warriors in the global battle for national development.

But, these intensifying forces of modernization have not occurred in a socio-cultural vacuum. One of the most striking outcomes is the sharp decline in traditional early marriage (Manning, 2018). As young Saudi men struggle with securing employment and pursuing entrepreneurial ventures, they are temporarily withdrawing from the Saudi marriage pool and necessarily postponing their nuptials. As a consequence, young, single Saudi women are experiencing an unprecedented period of personal "freedom" that has not been available to previous generations. This has led to a florescence of women's activities outside of the traditional social sphere of domesticity by pursuing graduate degrees, salaried employment, and entrepreneurial interests. This evolving socio-cultural dynamic challenges conventional assumptions about Saudi society regarding work, family/tribal relations, and the timing of establishing matrimonial households. As a result, one unmistakable contemporary trend is the rapid growth of entrepreneurial activities—especially among young Saudi women.

By examining the dramatic increase in Saudi small businesses, this chapter introduces the pre-COVID "*Aspirations and Obstacles to Entrepreneurship Project*" (AOEP). It is based on a national survey ((N=3,518) of college-educated Saudis (aged 19 to 29) that encompasses the three major Saudi metropolitan areas. It also features the multidimensional *Propensity for Entrepreneurship (Pfe)* © attitudinal scale that empirically classifies respondents into four distinct entrepreneurial groups: "*Samurai*," "*Traditional*," "*Reluctant*," and "*Ambivalent*." This analytic framework, which explicitly recognizes other salaried career and domestic household groups, mirrors the interplay between macro-economic fluctuations, labor market participation rates, and changing social norms towards marriage. Accordingly, it offers more complex insights into how motivations, cultural constraints,

economic growth, labor markets, and individual aspirations interact with broader social and economic transformations. By analyzing the rapidly changing social and economic landscape of Saudi Arabia, the chapter illuminates the Human Capital potential of Saudi youth—especially women—as catalyzing agents of economic growth and diversification. It concludes with a discussion of public policy implications as they influence future social, economic, and demographic trends during this dynamic period of Saudi national development.

## **BACKGROUND and LITERATURE REVIEW**

The research literature on Entrepreneurship in Saudi Arabia typically focuses on the growth of the Small and Medium Sized Enterprises (SME) ecosystem (Abdulrab *et al.*, 2021; Naushad, 2021; Moniem el sayed, 2020; Khan, 2016; Skoko, 2012) as dominated by older Saudi men (Eum, 2019; Nosseir, 2018; de la Vega *et al.*, 2016). This is not surprising. The formative employment and business experiences of these earlier cohorts of Saudi entrepreneurs have been largely shaped by pre-WTO domestic protectionist policies during the prosperous—albeit highly volatile--pre-COVID oil boom period; the average price of oil (inflation adjusted) ranged from \$19.35 per barrel in 1998 to \$56.99 in 2019 (Macrotrends, 2025). Another distinguishing feature of the Saudi SME ecosystem is its culturally embedded networks of social influence or ‘*wasta*’ (واسطة) that were forged from Bedouin tribal and familial affiliations during the post-World War Two consolidation of the Saudi state that produced multi-generation family businesses (Aloulou and Alshaeel, 2022; Hope and Scheck, 2021; Koelbl, 2020; Aloulou, 2018). Not incidentally, the adjudication of business activities and disputes under patriarchal Shariah Law has reinforced the social embeddedness of Saudi commercial relations to the disadvantage of foreign competitors and Saudi women.

### *Rise of Private Entrepreneurs as Contractors for Saudi Parastate Enterprises*

The early foundation of the Saudi SME ecosystem features disparate groups of male traders that successfully traversed the formidable desert terrain. They bought and sold food, spices, and merchandise from outside of the Arabian Peninsula. Over time, they established regional markets, production enterprises, and developed the nascent infrastructure of growing villages and towns; many were granted Saudi citizenship in the post-World War One period (Bowen, 2024; Wald, 2018; Al Rajhi, *et al.*, 2012). More important, however, is the symbiotic tribal and familial relationships forged with Saudi state Ministries that emerged in the post-World War Two period. They established the modern foundation of embedded Bedouin commercial networks based on lucrative public works contracts. These projects, initially financed during the early oil boom of the 1970s and 1980s, included construction of administrative buildings, mosques, schools, hospitals, and highway systems (Sabri, 2001; Rahman, 2014).

More recently, the growth of Saudi SMEs has flourished with the proliferation of subcontracting relationships with parastate enterprises. For example, the petrochemical/petroleum extraction conglomerate, ARAMCO, is the most profitable corporation in the global economy. Located in the Eastern Province, its corporate profits totaled \$722 billion between FY2016 and FY2023. This compares to \$558 billion for APPLE (Walt, 2024). Today, ARAMCO features an enormous portfolio of domestic and international contractors (Rundell, 2021; Koelbl, 2020; Wald, 2018). ARAMCO not only provides lucrative markets for young entrepreneurs but also business support services for Saudi start-ups and entrepreneurial-oriented employees (Manning, 2018). Until the recent recruitment of female workers in the 2010s, such “Intrapreneurship” opportunities were limited to male employees.

### *Managerial Structures, Extended Careers, and Entrepreneurship Pathways*

The managerial staff of Saudi public organizations are overwhelmingly men from influential tribes and families. With the traditional Saudi retirement age rising from 45 to 55 years old, many Saudi men are extending their work

careers in response to rising longevity trends. This has resulted in planning entrepreneurial ventures later in their professional careers as they prepare for mandatory retirement. Typically, Saudis receive a lump sum financial package from their employers upon reaching their specified retirement age although they can be re-hired as at-will “consultants.” These retirement packages can exceed millions of U.S. dollars, depending on salary and length of employment. Initiating pre-retirement investment projects also reflects the desire to create employment for their children who face a challenging job market with the contraction of public sector jobs and an increasingly merit-based hiring process (Aloulou, and Riyadh Alshaeel, 2022). Hence, it is not surprising that SMEs traditionally have been dominated by older, tribal Saudi businessmen with risk adverse attitudes and short business investment horizons (Manning, 2018).

#### *Traditional Obstacles Impeding Saudi Women from Wage-Labor and Entrepreneurial Roles*

Due to traditional gender roles, Saudi women historically have been discouraged from participating in the wage-labor workforce. Instead, foreign skilled and manual workers (Male and Female) have been recruited under the employer sponsored *kafala* (نظام الكفالة) system. This restrictive foreign labor system, characterized by limited worker rights, binds migrant workers to a specific employer throughout the period of their residence in a GCC country. More significantly, it establishes a low-wage floor that discourages Saudi nationals from entering the workforce.

Even in family enterprises, female children have been discouraged from learning and engaging in business activities (Manning, 2018). Instead, traditional gender roles prescribed early marriage for young Saudi women, typically 16-19 years old, (Gerbaka, *et al.*, 2021). They emphasized domestic household responsibilities, especially child rearing with assistance of foreign maids (Koelbl, 2020; Manning, 2018). Furthermore, under Islamic law, patriarchal “Guardianship” or *wilayah* (ولاية) rules require a male relative to grant permission (grandfather, father, uncle, brother, son) for a wide-range of activities such as working, traveling, and obtaining family records. Even married women may be denied employment outside of the household by their husbands--especially jobs in “mixed” gender workforces (Abdulhaffar and Akkad, 2021; Koelbl, 2020; Abou-Moghli and Al-Abdallah, 2019; Nieva, 2015; Ahmad, 2011a; 2011b). Although many of these restrictive cultural rules recently have been relaxed, Saudi patriarchal social control remains in more nuanced forms.

#### *Socio-Cultural Shifts and the Rise of Unmarried, Educated Saudi Women*

Nevertheless, the unrelenting forces of globalization have contributed to profound social change over the last two decades (Mathew 2010; Nosseir, 2018; Arab News 2021; Hani and Lopesciolo, 2021). This is manifest in the unprecedented growth of unmarried (single, divorced), highly educated, Saudi women in their 20s and early 30s (Anser, 2013; Saleh and Lupplicini, 2017; Manning, 2018; Abdulrahman and Alamri, 2021). It reflects three unprecedented socio-cultural trends. First, the postponement of eligible young men entering the Saudi marriage pool as they participate in a difficult labor market or launch uncertain entrepreneurial ventures. Second, the growing resistance of young Saudi women to arranged marriages with their first-cousins has resulted in the rise of modern “Love” marriages (Gerbaka *et al.*, 2021). This reflects the cultural impact of intensifying globalization pressures from Western countries that are eroding traditional attitudes toward kinship-based marriage unions (cf. Cherlin 2012). Third, soaring Saudi divorce rates, among the highest in the world, have contributed to the surge of women entering the workforce and/or establishing their own businesses or forms of self-employment (Abdulrahman and Alamri, 2021 Koelbl, 2020; Manning, 2018; Saleh and Lupplicini, 2017; Anser, 2013).

### *The Impact of Saudization on Foreign Worker-Dominated Occupations*

Until the late 2010s, traditional female occupations--as defined by Western societies--were primarily performed by foreign workers. Today, this trend is being reversed with the more rigorous enforcement of the government's Saudi Nationalisation Program or "*Nitaqat*" (السعودة). Beginning in the late 2000s, these labor policies are designed to replace foreign workers with Saudi nationals (Lucien *et al.*, 2023; Lopesciolo *et al.*, 2021; Cortes *et al.*, 2020; Kasoolu and Pan, 2020; Peck, 2017; Koyame-Marsh, 2016; Ghafour, 2015; Harvard Kennedy School, 2015; Ramady, 2013; Saudi Hollandi Capital, 2012; Steffen, 2012; Fakeeh, 2009; Al-Asmari, 2008). For example, pressuring businesses to hire Saudi women to replace Nepalese grocery store cashiers or Filipino retail clerks after the completion of employment contracts. The Saudi government encourages this policy with both 'carrot and stick;' financial incentives for hiring Saudis and higher taxes/financial penalties for retaining expat workers. During this period, moreover, a majority of vibrant private-sector companies (especially in service sector) were founded by foreign entrepreneurs who maintained a relatively low standard of living in order to offer low prices for their products and services. Hence, this market segment features fierce competition over low profits. Overall, these small family businesses and self-employed entrepreneurs were primarily from India, Pakistan, and Turkey.

### *Mixed Results of Saudization for Local Entrepreneurs and Markets*

Due to expat competition, Saudi nationals historically have been reluctant to open small retail shops, grocery stores, bakeries, restaurants, and personal services enterprises (barbershops, hair salons). As a result of Saudization policies, however, tens of thousands of expat entrepreneurs were forced to close or sell their shops to Saudi businessmen (Ghafour, 2015; Al-Dosary and Rahman, 2005; Al-Asfour and Khan, 2013). This government campaign to encourage young Saudis to enter the SME ecosystem has had mixed success. Although it has increased the number of Saudi-owned small-businesses (albeit with high failure rates), it has also led to increased consumer prices and fewer retail stores (especially in small villages). With rising store vacancies, Saudi real estate owners have suffered from reduced investment income and commercial property values of (Rundell, 2021).

### *Saudization and Expansion of Economic Opportunities for Women*

Undeniably, the more stringent enforcement of Saudization policies has increased employment opportunities for Saudi nationals, especially young women (Steffen, 2012; Peck, 2017; Le Renard, 2020; Koelbl, 2020; Lucien *et al.*, 2023). Even so, it is responsible for some unforeseen, negative economic outcomes. That is, it has contributed to increased labor costs (higher minimum wage for Saudi nationals) and lower worker productivity (Saudi nationals cannot be terminated after completing 3-month probation period) that have resulted in rising inflationary pressures (Hani and Lopesciolo, 2021; Lopesciolo *et al.*, 2021; Cortes, *et al.*, 2020; Harvard Kennedy School, 2015). As a consequence, replacing foreign workers with higher cost Saudi males has led to increased demand for more productive, lower cost Saudi females—especially unmarried women. Significantly, for young women with entrepreneurial aspirations, their recent participation in the labor market provides a critical source of start-up capital for launching small-business ventures (Manning, 2018).

### *Gender Empowerment and Social Change in Saudi Arabia: The New Role of Women in National Development*

In the MENA region in general and Saudi Arabia in particular, traditional patriarchal societies are experiencing intensifying pressures of modernization, economic liberalization, and social change (Manning, 2018; Nosseir, 2018; Koelbl, 2020; Arab News, 2021; Rundell, 2021; Hope and Scheck, 2021; Hubbard; 2021). These policies have been more aggressively pursued following the ascension of King Salman bin Abdulaziz in 2015 and the controversial

appointment of his seventh son, Mohammed bin Salman Al Saud (MBS), as Crown Prince in 2017 and Prime Minister in 2022. Today, as the *de facto* ruler of Saudi Arabia, MBS has hastened the pace of modernizing Saudi society (Hope and Scheck, 2021; Hubbard, 2021; Koelbl, 2020; Cochran, 2019).

The strategic objectives of MBS's "*Saudi Vision 2030 Plan*" include improving global competitiveness and diversifying the national economy, shrinking the size and increasing the productivity of the public sector, integrating sophisticated technologies in private and public enterprises, incentivizing the growth of private sector employment with more stringent Saudization labor policies, strategic use of the returns from the national Public Investment Fund, aggressively recruiting foreign investors (including expat home ownership), promoting entrepreneurship, and improving the social status of women (Kingdom of Saudi Arabia, 2023; 2023; Hope and Scheck, 2021; Hubbard, 2021; Rundell, 2021; Cortes, et al, 2020; Le Renard, (2020; Harvard Kennedy School, 2015).

The latter features a social and cultural revolution in gender roles and personal freedoms of women. Together with relaxing Guardianship rules and dramatically curbing the power of the Islamic religious police or "*Mutaween*" (مُطَوِّعِينَ), such as eliminating the requirement to wear loose fitting (typically black) robes or "*abayas*" (عباية) in public (Koelbl, 2020; Gulf News, 2018), enactment of an anti-harassment law to protect Saudi female workers (maximum penalty of up to five years in prison and a fine of up to SAR 300,000 (Eum, 2019), authorization for companies to hire Saudi women in 'mixed' workplaces but with separate work accommodations including toilets, security check-in systems, and private prayer rooms (Al-Omran, 2017), permission to drive automobiles, use of personal banking services, and legal ability to incorporate female-owned businesses (Al Naimi, 2022; Koelbl, 2020). Furthermore, the most important factor in impeding Female entrepreneurial ambitions has been the cultural tradition of early (especially arranged) marriage (Gerbaka *et al.*, 2021; Harima *et al.*, 2020). In an effort to improve women's rights in the Kingdom, the Ministry of Justice raised the minimum marriage age for women from 15 to 18 years old. Prior to this law, there were not any age restrictions for Saudi males or females (Abdulmalik, 2020).

#### *Evolving Freedoms, Entrepreneurial Aspirations, and Continuing Challenges*

It is important to note that new privileges granted to Saudi women are conferred by the Saudi Monarchy. It governs by Royal Decree in contrast to legal rights legislated by Western Constitutional governments. Hence, they may be rescinded at any time at the discretion of the Saudi King. However, with the *Saudi Vision 2030* 'blue print' for modernizing the country and increasing exposure to Western culture and societies (e.g., foreign travel, cable tv, YouTube, higher education, consumer products), the socio-political status and freedom(s) of women in Saudi Arabia are changing at an unprecedented pace (Alkhaled, 2021; Koelbl, 2020; Manning, 2018; Cherlin, 2012).

Even with limited access to financial resources (Algahtani, 2022; Khan, 2020; Basaffar *et al.*, 2018; Manning, 2018), Saudi women are pursuing self-employment and small business opportunities at escalating rates. This reflects the relaxation of male "Guardianship" restrictions together with greater economic opportunities outside of the household (Algahtani, 2022; Alreshoodi. et al, 2022; Khan, (2020; Eum, 2019; Manning, 2018; Maruf, et al, 2015). Hence, one of the key goals of the '*Saudi Vision 2030*' program has been achieved by unleashing the Human Capital of Saudi women (Badghish et al, 2023; Saikali, 2022; Almathami *et al.*, 2020; Moniem el Sayed, 2020; Abou-Moghli and Al-Abdallah, 2019; McAdam, 2019; Nieva, 2015). Even so, detailed demographic characteristics of Saudi Arabia's SME ecosystem—especially young female entrepreneurs—remain insufficiently examined and reported (Abdelwahed *et al.*, 2022; McAdam *et al.*, 2019; Manning 2018).

## SURVEY RESEARCH METHODOLOGY

### *“Aspirations and Obstacles to Entrepreneurship Project” (AOEP)*

The MENA Entrepreneurship research literature features a dearth of individual level data on labor force and small business aspirations of young, college educated Saudis—especially women. Fortunately, this informational void is filled by a unique national study of young, college educated Saudis: the *“Aspirations and Obstacles to Entrepreneurship Project.”* The AOEP survey was conducted between March 2016 and May 2017 at Prince Mohammad bin Fahd University (PMU) in Al Khobar, Saudi Arabia. The multi-stage sampling methodology includes the three major metropolitan centers of Saudi Arabia: Riyadh, Jeddah, and Dammam/Al-Khobar. Respondents answered the online questionnaire in either Arabic (77.9%) or English (22.1%). Significantly, the AOEP survey overlaps the data collection phase of the *KSA Global Entrepreneurship Monitor (GEM) 2016/17* survey (de la Vega *et al.*, 2016). It was conducted at Prince Mohammed bin Salman (MBS) University in Jeddah, Saudi Arabia. The fundamentally flawed data collection methodology of the 2016/17 GEM study resulted in very different conclusions about the growth and characteristics of the Saudi SME ecosystem. The individual-level data of the GEM KSA 2016/17 survey is based solely on interviews with Head of Households who were asked if they were engaged in entrepreneurial ventures. Not surprisingly, due to the data collection protocol that did not solicit information about the business activities of adult children in the household, these researchers erroneously conclude that the Saudi SME ecosystem is becoming increasingly comprised of older, Saudi males (de la Vega *et al.*, 2016).

### *The “Aspirations and Obstacles to Entrepreneurship Project” (AOEP) Data Set*

For this chapter, the empirical analysis is based on over 3,500 validated respondents. They include both Males (30.4%) and Females (69.6%). The topics of the survey include respondents’ socio-demographic factors, family background, marriage dower impacts, salaried employment preferences, business-related attitudes, business skills, motivations/commitment to entrepreneurial aspirations, gender-specific business orientations, preferred type of business activity, and expected date of new business launch. It is important to note that young, college-educated Saudi women were oversampled due to the lack of available data for comparative analyses. But, when appropriate for analytic purposes, the sample is weighted according to the Gender distribution of Saudi students enrolled in Saudi universities in 2016-17 (47.7% Males to 52.3% Females) according to the Saudi Ministry of Education (2017).

The sampling framework of the AOEP survey is inclusive of university-educated Saudis enrolled or previously enrolled in four-year degree programs between the ages of 19 and 29 years old. It includes all academic majors and the full range of students’ academic status—from freshman to graduate students. Hence, there is not a methodological bias toward selecting entrepreneurial aspirants or a bias against first-generation college students. The latter is attributable to the free cost of tuition at public universities and liberal Saudi scholarship programs for private universities during this period. More than 5,600 respondents participated in the survey and approximately 3,700 successfully finished the online questionnaire; the overall completion rate of 65.8 percent includes a somewhat higher rate among women. The final sample includes only those respondents that spent a minimum of 7 minutes to complete the questionnaire. For more details of the survey research methodology, see Manning (2018).

### *Descriptive Statistics of the AOEP Sample*

In mid-2016, the total Saudi population was 31.79 million residents. This includes the Saudi citizen population of 20.1 million and the foreign “expat” population of 11.71 million. Overall, the median age of the Saudi population was about 28 years-old (General Authority for Statistics, 2017). This is comparable to the youthful population of the Gulf Cooperative Council (GCC) countries; nearly 60% are less than 30 years-old (General Authority for Statistics, 2017). The six GCC countries all border the Persian Gulf: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Accordingly, the age of the AOEP sample ranges from 19 to 29-years-old. This is the key demographic segment that is transforming the Saudi SME ecosystem.



Overall, the median age of Male respondents is 23 years and 21 years for Female respondents ( $p < .001$ ). This age gap by Gender is not surprising since young Saudi Males often must take a leave of absence from university studies to assist their fathers, mothers (especially widows), uncles, brothers in family business and other personal affairs. Even so, the Gender difference in the overall age distribution of respondents is relatively modest with 83.5% of Male respondents and 94.8% of Female respondents between 18 and 25 years old ( $p < .001$ ).

Father's Education by Gender similarly evidences only modest differences. Overall, the data indicate that 30.5% of the respondents are first-generation college students: 28.3% of Males and 32.5% of Females. Not incidentally, over one-third of the respondents (35.2%) reports at least one parent who owns or operates a commercial enterprise. Saudi Males are more likely than Saudi Females to have at least one parent who owns a business (40.1% versus 30.7%); 4.0% of Males and 2.4% of Females report both parents as business owners.

## STATISTICAL ANALYSIS

### *Design of Propensity for Entrepreneurship (Pfe) Scale*

As previously noted, the *Propensity for Entrepreneurship (Pfe)* © scale explicitly recognizes the dynamic interplay between entrepreneurial and salaried employment attitudes. They are shaped by exogenous environmental-level factors such as fluctuating macro-economic conditions (recession vs expansion) and endogenous individual-level preferences (entrepreneurship vs salaried jobs/career). Accordingly, the *Pfe* attitudinal scale is a composite measure that features seven key dimensions of entrepreneurial behavior as identified in the research literature. They are Motivation, Risk-Taking, Commitment, Tenacity, Leadership Orientation, Innovation Orientation, and Business Orientation. A systematic selection/deletion "censoring" protocol was conducted with over 30 different questions from the AOEP survey that measure these key attitudinal dimensions. The final *Pfe* attitudinal scale is constructed from the most parsimonious group of 10 survey questions that yielded the "best fit" of the testable empirical models (Saris and Gallhofer, 2007; Groves et al., 2009; Ghauri et al., 2020).

Each of the final ten test items that comprise the *Propensity for Entrepreneurship (Pfe)* attitudinal scale are measured according to structured responses on a Likert Scale; the scores of individual scale items range from a High of 6 points to a Low of 0 points. The dimensions of Motivation, Risk-Taking, and Commitment are each measured by two test-items. *Motivation* measures the personal importance of becoming an entrepreneur as well as obtaining greater freedom and confidence. *Risk-Taking* taps the willingness to assume personal financial risk by starting one's own business and pursuing new market opportunities. *Commitment* examines personal/work life balance priorities as well as the willingness to adhere to a personal budget to help finance a new business. These three dimensions each constitute 20% of the final *Pfe* score.

The remaining four dimensions each constitute 10% of the final *Pfe* score. *Tenacity* measures the intensity of entrepreneurial ambition. In Saudi Arabia, it measures the willingness to resist the socio-cultural pressure of early marriage in order to launch a new commercial venture. *Leadership* taps into the ability to prioritize work when confronted with high levels of personal and professional stress. For *Innovation*, respondents self-evaluate their knowledge of IT and role of social media in starting a successful business. Lastly, *Business Orientation* reports the importance of conducting a feasibility study for the future success of any company.

Overall, the *Pfe* is an interval level, continuous scale with equal metrics that range from a high of 60 points to a low of 0 points. It includes six rank-ordered taxonomic categories that are demarcated by 10-point intervals: *Samurai Entrepreneurs* (51 to 60 points), *Traditional Entrepreneurs* (41 to 50 points), *Reluctant Entrepreneurs* (31 to 40 points), *Ambivalent Entrepreneurs* (21 to 30 points), *Salaried Employees* (11 to 20 points), and *Domestic/Housewives* (0 to 10 points). The last category includes unmarried women who remain in extended family households and divorcées with children. Some may engage in entrepreneurial activities several years later.

### *Principal Component Analysis (PCA): Statistical Confirmation of Pfe Scale*

First, Cronbach's alpha is calculated to assess the statistical reliability of the *Propensity for Entrepreneurship (Pfe)*

scale. It measures the internal consistency of all respondents' responses to the final ten test items (survey questions) that comprise the *PfE* scale (Mitchell, 1999; Streiner, 2003; Groves et al., 2009; Tavakol and Dennick, 2011; Ghauri et al., 2020). Since alpha corresponds to a probability, its theoretical range is from 1.0 (Perfect Reliability) to 0.0 (Zero Reliability). As a measure of scale reliability, Cronbach's alpha is best suited for structured responses on a Likert scale. This is because such survey questions examine latent structures that are difficult to measure (Mitchell, 1999; Saris and Gallhofer, 2007; Groves et al., 2009). In the academic research literature, a Cronbach's alpha score of 0.90 or higher is considered "Excellent" internal reliability, from 0.80 to 0.89 is "Very Good," and from 0.70 to 0.79 is "Good." Moreover, the robustness of Cronbach's alpha is sensitive to the number of scale items.

In addition to reliability of *PfE* scale, Principal Components Analysis (PCA) is the most appropriate statistical technique for empirically assessing the validity of the underlying structure of the *PfE* construct. This form of "exploratory" factor analysis examines all sources of variability (unique, shared, error variability) among a wide range of specified variables. Indeed, PCA is the preferred technique for factor "extraction" when the analytic focus is an inductive or exploratory investigation of underlying social/attitudinal structures and processes. The PCA technique extracts the maximum variance from a data set that yields the fewest orthogonal (uncorrelated) components. Hence, it provides an empirical validity test of the underlying structure of the *PfE* model. Unlike Factor Analysis, when PCA is the statistical method used for extraction, the resulting linear combinations are referred to as "components" rather than "factors."

A key objective of Principal Components Analysis (PCA) is variable or item reduction for identifying the most parsimonious models while empirically confirming the distinct components (e.g., Samurai) that define the underlying structure of the construct. This is a result of the statistical power of PCA in identifying and grouping together variables that share variability. By identifying correlated variables that cluster together and define specific components, PCA guides the reduction of variables in the empirical specifications by eliminating those that contribute little to the explained variance (Jolliffe and Cadima 2016; Geladi and Linderholm 2020; Ghauri et al. 2020; Mahmoudi et al. 2021).

#### *Principal Component Analysis (PCA):*

##### *Validating the Four Distinct Component/Entrepreneurial Categories of the *PfE* Scale*

The statistical results of the "Aggregate" *PfE* model (combined Males and Females) are presented in Table 1. They are based on the confirmed sample of respondents (N=3,518), weighted by Gender (47.7% Males and 52.3% Females), according to college enrollments in 2017 (Saudi Ministry of Education, 2017). Listwise Deletion is the default protocol and explains the variation in the number of respondents (cases) due to the missing data associated with each specified variable. Technically, the PCA analysis of the *PfE* scale is based on an orthogonal rotation method as guided by the varimax procedure. It yields those components that are uncorrelated with each other and thus represent some unique aspect of the underlying structure of the Propensity for Entrepreneurship (*PfE*) model. Eigenvalues, scree plots, reproduced correlations, and residuals were also calculated. They constitute the empirical criteria for determining the number of components to retain and interpret in the subsequent statistical analysis.

As reported in Table 1, the Cronbach's alpha test of internal consistency is 0.752. For the Aggregate *PfE* model, this moderately high value satisfies the statistical criterion for confirming the internal reliability of the specified set of test items. Especially since this score is derived from the ten most parsimonious survey questions. Next, the table presents the major components (group classifications) as identified by PCA. The first three components are retained based on their eigenvalues exceeding the traditional threshold of 1.0 following "Kaiser's rule." Component 1 (*Samurai Entrepreneurs*), with an eigenvalue of 3.298, is as expected the dominant cluster of respondents. It explains 32.98% of the model's variance. The eigenvalue of Component 2 (*Reluctant Entrepreneurs*) drops sharply but it is a respectable 1.288. It explains 12.88% of the variance while Component 3 (*Traditional Entrepreneurs*) reports an eigenvalue of 1.008 that explains an additional 10.08% of the variance.

Component 4 is retained with a marginal eigenvalue of 0.885. This *Ambivalent Entrepreneur* group explains

*Table 1: Propensity For Entrepreneurship (Pfe): Total Variance Explained\*  
Aggregate Model\*\*  
(N=3,518)*

Cronbach Alpha= .752 Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>Samurai (1)</b>	3.298	32.979	32.979	3.298	32.979	32.979	2.944	29.439	29.439
<b>Reluctant (2)</b>	1.288	12.884	45.862	1.288	12.884	45.862	1.316	13.163	42.602
<b>Traditional Business (3)</b>	1.008	10.076	55.938	1.008	10.076	55.938	1.215	12.148	54.750
<b>Ambivalent (4)</b>	.885	8.849	64.787	.885	8.849	64.787	1.004	10.038	64.787
5	.749	7.488	72.275						
6	.712	7.117	79.392						
7	.624	6.236	85.628						
8	.607	6.066	91.694						
9	.447	4.475	96.169						
10	.383	3.831	100.000						

\* Extraction Method is Principal Components Analysis (PCA). An orthogonal rotation method was used based on the varimax procedure.

\*\* The survey data is weighted based on the gender distribution of the population of Saudi Higher Education students in 2016-17: 47.7% Males and 52.3% Females.

8.85% of the variance of the Aggregate model. This is not surprising since this group shares the most attitudinal traits with *Traditional* and *Reluctant Entrepreneurs*. It is included in the analysis following a review of the Scree Plot, reproduced correlations, and residuals. They show a much sharper slope declination beginning with Component 5. Together, these four principal components account for an impressive 64.79% of the variance of the Aggregate *PfE* model. In sum, the PCA's statistical results reject the assumption of unidimensionality of respondents' entrepreneurial attitudes. Overall, the PCA analysis empirically confirms a heterogeneous attitudinal structure that underlies a classification taxonomy of four empirically distinct entrepreneurial groups. Accordingly, the primarily Salaried Employee and Domestic Household groups, Components 5 to 10, account for the remaining residual variance (35.21% combined) of the Aggregate model.

#### *Propensity for Entrepreneurship (PfE):*

##### *The Defining Characteristics of Four Empirically Distinct Entrepreneurial Components*

With the confirmation of the internal reliability of the *PfE* scale and the validation of four empirically distinct components, the Principal Components Analysis (PCA) proceeds by examining the component loadings of the 10 specified items as they align on the four major *PfE* components (Entrepreneur categories). They are interpreted like a Pearson correlation coefficient of a variable with its associated component. Like Pearson correlations, the value of component loadings range from +1.0 (perfect positive association with the component) to 0.0 (no association) to -1.0 (perfect negative association with the component). Although test items typically generate loadings on all components, they rarely have very high loadings on more than one (Aron *et al.*, 2021).

As reported in Table 2, the PCA results of the Aggregate *PfE* scale are based on the Rotated Components Matrix procedure. This technique more efficiently aligns the test items to each respective component after completing the matrix rotation that minimizes correlations between components. As expected, the dominant *Samurai* Component reports the strongest, uniformly positive matrix coefficients for all seven attitudinal dimensions. In rank order, the three highest test items measure the attitudinal dimensions of MOTIVATION, "Entrepreneurship Increases Freedom and Confidence" (.802), RISK-TAKING, "Pursue Market Opportunities" (.786), and BUSINESS ORIENTATION, "Importance of Business Feasibility Analysis" (.775).

The next three ranked items similarly report consistently high, positive coefficients: INNOVATION, "Very Knowledgeable About Role of IT in Social Media" (.651), TENACITY, "Start New Business Before Marriage," (.634), and MOTIVATION, "Very Important For Me to Become an Entrepreneur," (.480). The remaining component loadings are low but all exhibit positive statistical associations. They are COMMITMENT, "Adhere to Personal Budget to Finance New Business," (.123), LEADERSHIP At Work, "Prioritize Work Over Personal Life," (.074), COMMITMENT, "Prioritize Work Over Family Vacation," (.053), and RISK-TAKING, "Intend to Start Business in 5 Years," (.045). In sum, all seven attitudinal dimensions evidence uniformly positive statistical associations with the dominant component.

Overall, the first Component is defined by the most motivated, tenacious, innovative, risk-taking entrepreneurial aspirants whose focus is to generate personal power/recognition based on creating strong, pathbreaking enterprises that may become 'industry disruptors.' This contrasts with other entrepreneur aspirants that are motivated by accumulating wealth through executive salaries and business equity. Indeed, the most surprising statistical outcome is the very weak association of Start New Business Within 5 Years (.045) in comparison to the very strong, positive association of Start New Business Before Marriage (.634). This suggests that the members of this group are more methodical and disciplined in their preparation to become successful businesspeople than simply targeting a specific date to launch their new business ventures. Furthermore, as revealed by the importance of the TENACITY item, researchers must be cognizant of unique socio-cultural factors and contexts that may influence the decision to engage in entrepreneurial activities. Hence, the *Samurai Entrepreneur* component is defined by a small but determined "ideal" group that includes the next generation of industry innovators such as a future Lubna Olayan or Elon Musk.

Table 2: Propensity For Entrepreneurship (Pfe):\* Matrix Coefficients of Pfe Components\*\*

**AGGREGATE MODEL\*\*\***  
(N=3,518)  
**Rotated Component Matrix<sup>a</sup>**

	Components			
	Samurai	Reluctant	Traditional	Ambivalent
	(1)	(2)	(3)	(4)
<b>MOTIVATION:</b> Very important for me to become an entrepreneur	.480	.099	.546	.065
<b>MOTIVATION:</b> Entrepreneurship increases freedom and confidence	.802	.066	.118	.021
<b>RISK:</b> Intend to start new business in 5 years	.045	.003	.922	-.016
<b>RISK:</b> Pursue market opportunities	.786	.125	.065	.046
<b>COMMITMENT:</b> Prioritize work over family vacation	.053	.131	.016	.976
<b>COMMITMENT:</b> Adhere to personal budget to finance new business	.123	.761	.126	.005
<b>TENACITY:</b> Start new business before marriage	.634	-.198	.149	.091
<b>LEADERSHIP:</b> Prioritize work over personal life	.074	.764	-.067	.133
<b>INNOVATION:</b> Very knowledgeable about role of IT in social media for biz	.651	.183	.064	-.108
<b>BIZ ORIENTATION:</b> Importance of business feasibility analysis	.775	.183	.027	.078

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

\* The survey data is weighted based on the gender distribution of the population of Saudi Higher Education students in 2016-17:

47.7% Males

52.3% Females.

\*\* Extraction Method is Principal Components Analysis (PCA).

An orthogonal rotation method was used based on the varimax procedure.

\*\*\* Four components were extracted with minimum Eigenvalue of 0.85 by final iteration.

The matrix coefficients of the next ranked Component differ sharply from the dominant *Samurai*. All of the MOTIVATION and RISK-TAKING items yield only modest to negligible, positive associations compared to the uniformly high, positive matrix coefficients of the *Samurai* component. This pattern is demonstrated by comparing the respective matrix coefficients on these two components: Obtain Freedom and Confidence as Entrepreneur (+.066 versus +.802), Pursue Market Opportunities (+.125 versus +.786), Important to Become Entrepreneur (+.099 versus +.480), and Intend to Start New Business Within 5 Years (+.003 versus +.045). These consistently low matrix coefficients characterize the second “*Reluctant Entrepreneurs*” Component. They reflect the lack of desire and self-confidence in engaging in small-business activities.

Furthermore, Component 2 exhibits contradictory/mixed attitudes. That is, some items with the strongest statistical associations are much higher than the *Business Samurai* component. In rank order, they are: Prioritize Work Over Personal/Family Life (+.764 versus +.074), Adhere to Personal Budget to Finance New Business (+.761 versus +.123), and Prioritize Work Over Family Vacation (+.131 versus +.053). The underlying attitudinal structure of this component suggests a strong work ethic and willingness to make personal sacrifices but not necessarily with the primary goal of starting a new business. Similarly, the matrix coefficients of Importance of Business Feasibility Analysis (+.183 versus +.775) and Very Knowledgeable About IT Innovation (+.183 versus +.651) imply much weaker entrepreneurial preparation than the *Samurai* component. This suggests much lower interest in acquiring necessary business skills which may explain the attenuated commitment to launching entrepreneurial ventures.

Lastly, unlike the *Samurai* component with the highest component loading on Start New Business Before Marriage (+.634), the second component features a moderate, *negative* matrix coefficient (-.198). This suggests a lack of compelling motivation and tenacity toward pursuing commercial activities. It includes *Reluctant Entrepreneurs* that are grudgingly expected to engage in family business activities. They may be familiar with the incessant demands of business ownership and accompanying stress that is required for successful entrepreneurial ventures. Indeed, they may be unwilling to accept such personal/family sacrifices. Others may anticipate difficulty in securing a “good” job and perceive small-scale business activities as a less desirable but pragmatic survival strategy. Additionally, some may reluctantly engage in entrepreneurial enterprises as a temporary refuge from socio-cultural obstacles to salaried employment as well as postponed nuptials. In the research literature, the former job-seekers are commonly referred to as “Necessity” Entrepreneurs. They temporarily engage in entrepreneurial activities when unable to secure preferred salaried employment. Hence, the PCA component loadings reveal contradictory attitudes toward Entrepreneurship albeit with strong work ethic and job commitment attitudes.

The most distinguishing feature of Component 3 is the very high factor loading on RISK-TAKING, “Intend to Start New Business Within 5 years” (+.922). In fact, it ranks as the second highest matrix coefficient of the Aggregate model and dwarfs the factor loadings on the other three components (+.045, +003, -.016, respectively). The next strongest statistical association is MOTIVATION, “Very Important To Become Entrepreneur” (+.546). Not surprisingly, the third component aligns more closely with the *Samurai* on some other items (Adhere to Personal Budget [+0.126 versus +.123] and Prioritize Work Over Personal Life [-.067 versus +.074] whereas it aligns more closely with *Reluctant Entrepreneurs* on other items: (Entrepreneurship Gives Greater Freedom and Confidence [+0.118 versus +.066], Pursue Market Opportunities [+0.065 versus +.125], Importance of Business Feasibility Analysis [+0.027 versus .183], and Knowledge of IT for Social Media [+0.064 versus +.183]).

The final TENACITY item, “Start New Business Before Marriage” (+.149), is especially intriguing since this component is defined by MOTIVATION to “Start New Business Within 5 Years” (+.922) and “Very Important to Become an Entrepreneur” (+.546). The sharp drop in this matrix coefficient compared to the *Samurai* component (+.149 versus +.634) is consistent with the very low statistical association with the items that prioritize work above personal/family life: Job Over Vacation (+.016), Work Priority (-.067), and Personal Budget to Finance New Business (.126). These low component loadings suggest that the social expectation of early marriage and starting a family are valued more highly by this group than the personal sacrifices required to become a successful businessperson. This may reflect the socio-economic background of those from affluent tribes/families (especially business owners) with sufficient economic resources to simultaneously finance both early marriage and new business activities. That is,

the social networks that provide the opportunities for business success require continuous investment of social capital such as orchestrating marriage between wealthy families, organizing social events, and celebrating successful tribal ventures.

Regardless of the reasons, this third component is characterized by the intense desire to start entrepreneurial ventures which is amplified by the high esteem ascribed to businessmen in Saudi society. Clearly, for these respondents, their future professional identity and career objectives are defined by the high social status of Businesspeople. Even so, their primary goal is *not* to become visionary industry innovators or to achieve celebrated business success by sacrificing personal lifestyle and/or family social activities. Rather, they seek a balance between the social rewards of business success and family responsibilities in their early- to mid-twenties. Accordingly, the third component is labelled “*Traditional Entrepreneurs.*”

The fourth Component yields the smallest explained variance (8.85%). As expected, this marginally significant component exhibits some item consistencies with *Reluctant Entrepreneurs* while other items are more consistent with *Traditional Entrepreneurs*. This is demonstrated by comparing specific matrix coefficients across these related yet distinct components. For example, the comparison of key items with the *Reluctant Entrepreneur* component are MOTIVATION, “Importance of Becoming an Entrepreneur” (+.065 versus +.099) and “Entrepreneurship Increases Freedom and Confidence” (+.021 versus +.066), and RISK-TAKING, “Intend to Start New Business Within 5 Years” (-.016 versus +.003). Another set of items share relatively more similar statistical associations with the *Traditional Business* component. They are RISK, “Pursue Market Opportunities” (+.046 versus +.065), COMMITMENT, “Adhere to Budget to Finance New Business” (+.005 versus +.126), TENACITY, “Start New Business Before Marriage” (+.091 versus +.149), and BUSINESS ORIENTATION, “Importance of Business Feasibility Analysis” (+.078 versus +.027).

Even so, the starkest contrast with *Traditional Business* is reported by the matrix coefficients for MOTIVATION, “Becoming an Entrepreneur is Very Important (+.065 versus +.546), COMMITMENT, “Prioritizing Work Over Vacation” (+.976 versus +.016) and INNOVATION, “Knowledge of IT for Social Media” (-.108 versus +.064) whereas the sharpest contrast with the *Reluctant Entrepreneur* component is evidenced by the matrix coefficients for COMMITMENT, “Prioritize Work Over Family Vacation” (+.976 versus +.131) and “Adhere to Personal Budget” (+.005 versus +.761), TENACITY, “Start New Business before Marriage” (+.091 versus -.198), LEADERSHIP, “Prioritize Work over Personal Life” (+.133 versus +.764), and INNOVATION ORIENTATION, “Knowledge of IT for Social Media” (-.108 versus +.183).

Accordingly, the fourth Component is defined by its very weak commitment to entrepreneurship together with very low risk tolerance, poor business preparedness/skills, and unwillingness to make financial and social (delayed marriage) sacrifices to start a new business. On the other hand, it exhibits a strong work ethic that prioritizes work over family life and personal lifestyle issues. These mixed and often inconsistent attitudes define this final component as “*Ambivalent Entrepreneurs.*” In sum, this group may aspire to become highly respected businesspeople with handsome material rewards but it is not willing to make the necessary sacrifices and assume the risks necessary for entrepreneurial success. In regard to the remaining Components (5 to 10) of the Aggregate model, the unexplained residual variation is attributed to respondents with very little interest in becoming Entrepreneurs, at least in the near future. The primary goals of these groups are to obtain salaried employment, higher education, and/or domestic household/marriage responsibilities.

#### *Propensity for Entrepreneurship (PfE):*

#### *Discussion of Young Entrepreneur Groups by Gender*

Following the validation of the *PfE* classification schema, the distribution of the AOEP respondents by Entrepreneurial group and Gender is presented in Table 3. As expected, *Samurai* (8.1%) are the smallest group. These intensely driven, risk-taking, industry innovators represent the ideal entrepreneurs as highlighted by the PCA results. Notably, *Samurai* are more motivated by the pursuit of social prestige and industry power than by the desire

Table 3: Propensity For Entrepreneurship (Pfe) BY Gender\*  
(N=3,518)

<b>Propensity for Entrepreneurship</b>	<b>MALES**</b> (N=1,070)	<b>FEMALES**</b> (N=2,448)	<b>TOTALS</b> (N=3,518)
<b>Samurai Entrepreneurs</b> <b>(Very High)</b> (N=275)	<b>8.9%</b> (N=95)	<b>7.3%</b> (N=180)	<b>8.1%</b> 7.8%
<b>Traditional Entrepreneurs</b> <b>(High)</b> (N=934)	<b>26.4%</b> (N=282)	<b>26.6%</b> (N=652)	<b>26.5%</b> 26.6%
<b>Reluctant Entrepreneurs</b> <b>(Medium)</b> (N=1000)	<b>28.1%</b> (N=301)	<b>28.6%</b> (N=699)	<b>28.4%</b> 28.4%
<b>Ambivalent Entrepreneurs</b> <b>(Medium Low)</b> (N=581)	<b>19.9%</b> (N=213)	<b>15.0%</b> (N=368)	<b>17.3%</b> 16.5%
<b>Salaried Employees</b> <b>(Low)</b> (N=603)	<b>12.5%</b> (N=134)	<b>19.2%</b> (N=469)	<b>16.0%</b> 17.1%
<b>Domestic Household/ Marriage</b> <b>(Very Low/No Interest)</b> (N=125)	<b>4.2%</b> (N=45)	<b>3.3%</b> (N=80)	<b>3.7%</b> 3.6%
<b>TOTALS</b>	<b>100.0%</b> (30.4%)	<b>100.0%</b> (69.6%)	<b>100.0%</b>

\* Model is weighted based on gender distribution of the population of Saudi Higher Education students in 2016-17: 47.7% Males and 52.3% Females.

\*\* p<.001.



to acquire material wealth, especially women (Manning 2018). This select group includes business visionaries that are a dynamic source of transformative entrepreneurial energy that is crucial to successful national development.

Some *Samurai Entrepreneurs* will eventually join the Saudi business elite. Although *Samurai* account for 8.9% of Male respondents, it is surprising that their intensely devoted Female counterparts account for only a somewhat smaller proportion: 7.3%. Indeed, most *Samurai* Females are willing to postpone marriage for future business success. The major difference is the specific industrial sectors that they choose to cluster (Manning, 2018). Currently, access to financial capital is channeling *Samurai* Males into high technology, construction, and manufacturing sectors whereas scarce financial resources tend to limit Females to segments of the service sector.

The next ranked group is *Traditional Entrepreneurs* (26.5%). The primary objectives of these aspiring businesspeople are material wealth and social status. Although they are determined to become commercially successful, they tend to value family/lifestyle issues over work. Indeed, a distinguishing feature is their resistance to postponing marriage which defines the tenacity of the *Samurai*. Of course, many are from affluent backgrounds with support from successful family businesses that obviate the need to make financial sacrifices for launching new commercial enterprises. The priority of personal/lifestyle activities over work most likely reflects the rational investment of personal capital into the social networks that underlie the profitability of their entrepreneurial ventures. For example, participating in family/tribal celebrations that reinforce social cohesion such as weddings, births, school graduations, religious holidays, and group vacations. Significantly, the proportion of Males is slightly less than Females (26.4 vs 26.6%). Overall, 34.6% of young college educated Saudis (*Samurai* plus *Traditional Entrepreneurs*) are highly motivated and expect to become small business owners. And, there is only a modest difference by Gender. Even so, when compared to their parents who own a business (35.3%), the proportion of Males in the top ranked groups falls from 40.1% to 35.3% whereas Females jumps from 30.7% to 33.9%.

The remaining groups exhibit much lower intensity of commitment to entrepreneurship. *Reluctant Entrepreneurs* (28.4%) expect to pursue small-business activities—at least temporarily—based on a pessimistic assessment of their future job and marriage prospects. Indeed, their tenuous entrepreneurial intentions are primarily attributed to the economics of necessity and, to a lesser extent, pressures to join family businesses. For most of these Saudi Males, the primary motivating factor is the lack of adequately compensated jobs rather than the desire to achieve small business success; for this group, marriage is not financially feasible in the near future. Hence, entrepreneurial activities may serve as a pragmatic, temporary strategy until they re-enter the labor market and secure more desirable salaried employment.

For Females, the shortage of young men in the available pool of marriage partners is exacerbated by the lack of suitable salaried jobs. Unlike their mothers' generation, many will engage in self-employment and small-business activities while impatiently planning their nuptials. The key question is whether their future husbands will permit them to continue entrepreneurial activities after their marriage. Some will reluctantly sell/transfer their businesses to a sister/other family member or friend in preparation for their wedding. Others may concentrate on expanding their small-businesses and postpone marriage until their late twenties and even early thirties. Or, even leave Saudi and pursue their business ambitions in another country. Overall, fewer Males (28.1%) than Females (28.6%) comprise the *Reluctant Entrepreneurs* group.

The next group, *Ambivalent Entrepreneurs* (17.3%), aspires to engage in small business activities. But, their low risk tolerance, lack of operating capital, and weak business preparedness skills impedes the realization of their entrepreneurial aspirations (Manning, 2018). For Saudi Males, the social status of becoming a businessman is very important. However, the intense pressure to save for their dowry and wedding expenses while accumulating sufficient operating capital to launch a new business is a nearly insurmountable obstacle for those from working and middle-class families. Indeed, this important Gender difference is based on contextually specific religious,

cultural, and social factors. Under Shariah law, Muslim men are obligated to provide their future bride with a substantial marriage dowry (*Mahr*). Interestingly, it is not a universal cultural custom for men to present a marriage dowry to their wife or their wife's family. In India, for example, Muslim men are obligated to provide their wives with a marriage dowry whereas Hindu women must present a marriage dowry to their husbands. Consequently, it is important to note that Saudi women can more quickly launch their entrepreneurial ventures without dowry-related financial obligations even though their jobs offer much lower salaries than Saudi men (Manning, 2018).

*Ambivalents* are less likely than *Reluctant Entrepreneurs* to aspire to pursue small business activities. They constitute about one-fifth of the sample (19.9%). Although attracted to high social status and greater material rewards, their lack of motivation, risk tolerance, and business preparedness skills ensures that their business aspirations will be rarely realized. They are limited to salaried employment and domestic/household roles. Indeed, the only positive attitude of *Ambivalent Entrepreneurs* that is shared with other entrepreneurial aspirants is their strong work ethic. But, this is also common attribute of *Career Employees and Domestic/Household* groups. Not surprisingly, Males (19.9%) are more likely than Females (15.0%) to be classified in this group. This is because a large proportion of Females are content with future domestic roles although some prefer the flexibility of home-based entrepreneurial activities in order to save for their wedding expenses (Manning, 2018).

Overall, the total proportion of the three lowest ranked groups with the least interest/likelihood of engaging in entrepreneurial activities is 37.0%; slightly fewer Males (36.6%) than Females (37.5%). This reflects the perception of significantly improved employment opportunities for young Saudi women over the last decade in both the public and private sectors. Nevertheless, when combined with *Reluctant Entrepreneurs* (28.4%) whose primary objective is obtaining a 'good' job, the estimate of the most committed Saudi entrepreneurial aspirants is about one-third (35.3% Males, 33.9% Females). Consequently, the most striking finding of the *PfE* classification schema is the remarkably even distribution by Gender.

#### *Propensity for Entrepreneurship (PfE): Social and Public Policy Ramifications*

The *Propensity for Entrepreneurship (PfE)* © system identifies a wide range of social and public policy issues as well as potential administrative support capabilities for ascertaining potential programmatic solutions. This is especially important for national planning and public investment purposes.

First, the *PfE* algorithm provides an efficient filtering/sorting system for identifying the most promising entrepreneurs. After completing a short application with *PfE* questions, candidates can be immediately assessed for their enrollment in different public and private programs. For example, the *PfE* algorithm will immediately identify potential *Samurai Entrepreneurs* for public financial and business support services. These "ideal" entrepreneurs will be more efficiently processed and quickly connected to business support mentors. Fast-tracking *Samurai Entrepreneurs* will accelerate their business development and thus their future contributions to business innovation, economic growth, and national development.

Second, this segmentation approach may proceed to evaluating *Traditional Entrepreneur* candidates. They can be evaluated for business preparedness and enrolled in specialized programs to address their business skill deficiencies. During this period, detailed business plans will be evaluated for placement in appropriate incubator or accelerator programs.

Third, after classifying *Reluctant* and *Ambivalent Entrepreneur* candidates, they can be transferred to more appropriate job training programs rather than increasing the backlog of counseling sessions for small businesses start-ups. This classification protocol may streamline the public and private assessment process while increasing productivity and other public benefits.

Fourth, due to evaluation biases in small business loans for Female entrepreneurs, customized *PfE*

assessments can be used to supplement traditional underwriting/lending criteria. This will help bridge the Gender gap in business loan approvals. As a result, it could significantly improve bank lending and growth of Female-owned businesses.

Fifth, delayed marriage in Saudi Arabia is increasing demand for advanced, graduate degrees by young women. This is a propitious opportunity for offering public education grants and loans for women seeking specialized degrees in technology-driven and female-owned business sectors. Also, in the legal field where women are underrepresented. This will justify increased public funding to offer new specialized degree programs in Saudi universities. For example, animation/graphic design programs for developing electronic game systems for the entertainment and leisure sector.

Sixth, due to delayed marriage, Saudi Arabia is experiencing an unprecedented growth of socially and economically active young adults. Their economic power is growing—especially in urban areas—which is accelerating the demand for a wide range of services. Female-owned businesses are well positioned to provide and innovate these services that have not been traditionally offered. Accordingly, the concentration of female-owned businesses in the service sector merits the establishment of a specialized office of female-owned, service-oriented enterprises with particular attention to the entertainment and leisure segment.

Seventh, Saudi Arabia is experiencing a sharp decline in the fertility rates of young Saudi families. This will impact the future labor supply provided by Saudis. Moreover, due to increased Saudi longevity trends, this suggests that an appropriate public policy response is to extend the mandatory retirement age—from 55 to 65 years old. This also increase financial retirement benefits and thus the investment capital for future entrepreneurial ventures.

Eighth, delayed marriage is postponing new household formation and thus the demand for homeownership among young Saudi adults. There is a limited window of time (5-10 years) for the Saudi government to expand/innovate public and private mortgage programs as well as to generate liquidity/credit guarantees for funding construction projects. This pent-up demand for private housing will soon impact national capital markets and construction capabilities without developing new financial markets and consumer lending policies.

## CONCLUSION

Since Mohammed Bin Salman (“MBS”) Al Saud’s appointment as Crown Prince of Saudi Arabia in 2017, the Kingdom has experienced a profound period of rapid modernization, economic diversification, and social change—especially Gender roles. This chapter, based on a national survey (N=3,518) of college-educated Saudis from 19-29 years old, examines the sharp rise of young Saudi entrepreneurs through a unique, multidimensional *Propensity for Entrepreneurship (Pfe)* © attitudinal scale. It differentiates four entrepreneurial groups (“*Samurai*,” “*Traditional*,” “*Reluctant*,” “*Ambivalent*”) from salaried employees and domestic household groups. Rigorously evaluated by Principal Components Analysis (PCA), this empirical taxonomy explicitly recognizes the interplay between macro-economic fluctuations, labor market participation, and changing social norms towards marriage.

The empirical results indicate that young Saudi women (N=2,448) aspire to salaried employment and entrepreneurship at rates comparable to men while actively resisting traditional gender roles. This reflects changing Saudi social norms as well as the double-financial burden of young Saudi Males (N=1,070) who must save money for small business ventures as well as for their future marriage expenses (dowry, wedding, household furnishings). Accordingly, the intensifying financial pressures experienced by young Saudi men requires prioritizing their salaried work and entrepreneurial aspirations over the social expectations of early marriage. This has created an historically unprecedented “free” social space for young (single) Saudi women to pursue higher education, work careers, and entrepreneurial activities before establishing their matrimonial households in their mid-to-late 20s—five to ten years later than their mothers.

The chapter concludes with a discussion of social and public policy ramifications. It recommends the

*Propensity for Entrepreneurship (Pfe)* algorithmic system as a filtering system to identify the most promising entrepreneur aspirants and match them with appropriate business support programs. This includes identifying the least suitable entrepreneur candidates and transferring them to job skill development programs. The Pfe assessments can also be customized to supplement Gender biased loan underwriting criteria. And, with delayed nuptials, there is heightened demand for young women to enroll in graduate programs that could improve the Human Capital of the Kingdom. Public grants and loans could encourage female matriculation in high demand specializations. Lastly, the diversification of the Kingdom's economy into entertainment, leisure and personal services offers enormous opportunities for female entrepreneurs to shape the growth and innovations of this sector. An office that promotes female-owned businesses in the services sector could dramatically transform this sector and generate rapid growth and female oriented jobs.

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