



ECONOMIC PERSPECTIVES ON ENTREPRENEURSHIP

*BIBLICAL INTERPRETATIONS AND
APPLICATIONS*

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ABSTRACT

Entrepreneurial activities constitute one of the most important determinants in economic growth and the wealth of nations. Growing evidence suggests that better understanding and explanation of the decision-making and performance of nascent enterprises can be achieved by applying the perspectives of behavioral economics. This essay examines five unique behavioral characteristics of value-creating and sustainable startups - innovativeness, decision making under uncertainty, risk tolerance, time preference, and optimism. A comprehensive survey of the economic literature on these factors relating to entrepreneurship is performed. To gain further insights into the challenges posed by these factors, especially in the ways they can be harnessed for the benefit of small business leaders, interpretations from biblical accounts specific to each of these items are offered. The analysis contributes to better decision making for entrepreneurial leaders regardless of their faith orientation. It does, however, offer particular encouragement to Christian entrepreneurs who strive to build a mission-driven enterprise that seeks to advance God's will on earth.

product (GDP).² In fact, 99.7 percent of businesses with paid employees across the U.S. are small businesses which collectively employ 46.4 percent of all U.S. workers.³

Richard Cantillon, an Irish economist who worked much of his life in France, was the first to define entrepreneurship.⁴ In his essay in 1755, Cantillon used the French word, *entreprendre*, a verb that means to begin or to undertake. The word entrepreneur did not appear in English until 1762, three years after Adam Smith published his *Theory of Moral Sentiments*. Cantillon changed the original definition to someone who bought inputs at fixed prices and sold goods at uncertain future market prices. The entrepreneur was thus subject to uncertainty, profits/losses, and competition.⁵

Given the challenges of starting and operating new businesses, entrepreneurs need to be knowledgeable, resourceful, and possess certain personality traits that predispose them to setting non-traditional career goals. Many circumstances that contribute to the success or failure of startups are economic (or situational) in nature, but much evidence also suggests their sustainability rides on behavioral (or dispositional) characteristics of the leaders and the culture they create. The intersection of economic and behavioral considerations makes the study of entrepreneurship from a behavioral economics perspective particularly attractive.

In this essay we look at entrepreneurship using a behavioral economics lens and examine the application of Scripture to the small business leader's decision making. The cultural mandate as prescribed in Gen. 1:28 acknowledges the importance of human innovation and its contribution to human flourishing in God's economy. The Scripture is replete with wisdom that infuses the enterprising human agency with moral and ethical convictions that would lead to God-glorifying economic progress. The biblical perspectives, while reinforcing some research findings from the fields of economics and psychology, also offer new, valuable insights that benefit entrepreneurship in general, and (Christian) faith-based entrepreneurship in particular.

We begin with a survey of the economic literature on the entrepreneur as an economic agent, followed by an exegesis of relevant biblical accounts and an examination of their possible application to nascent enterprises. We conclude with a summary of the insights, the biblical illustrations, the way entrepreneurs may benefit from these perspectives, and the implications for further research.

▶ INTRODUCTION

What is entrepreneurship? According to Lazear, "Entrepreneurs put people together in particular ways and combine them with physical capital and ideas to create a new product or to produce an existing one at a lower or competitive cost."¹ We adopt Lazear's definition in this article to focus on non-sole proprietor entrepreneurs who operate small but sustaining businesses. For many reasons, the entrepreneur is the single most important player in a modern economy. According to the U.S. Small Business Administration, small businesses account for 44 percent of economic activity in the United States, create two-thirds of new jobs and deliver 43.5 percent of the United States' gross domestic

▶ ENTREPRENEURSHIP – ECONOMIC LITERATURE SURVEY

Certain dispositional factors seem to characterize the modern-day entrepreneur from an economic perspective.⁶ In this essay we will focus on the entrepreneur as someone who (a) pursues innovation, (b) makes decisions under uncertainty, (c) is risk tolerant, (d) has patience and reduced time preference, and (e) exhibits optimism. We begin with a survey of economic literature that discusses these traits in the context of entrepreneurship.

INNOVATION

Because innovativeness is significantly and positively correlated with business creation and business success, innovativeness is a personality trait that is often a central component of entrepreneurial orientation.⁷ Schumpeter is the first to bring innovation into economists' discussions of entrepreneurship. He defined an entrepreneur as someone who starts a new business and implements new ways of doing things because existing businesses resist innovations.⁸ Drucker agreed that it is not the size or the age of business that identifies entrepreneurship. What matters is if the actions constitute "effort to create purposeful, focused change in an enterprise's economic or social potential."⁹ In the spirit of Baumol, we will further confine the definition of entrepreneur in this essay to value-creating instead of rent-seeking (e.g., lobbying, lawsuits) activities.¹⁰

DECISIONS UNDER UNCERTAINTY

Schumpeter's innovative entrepreneur only takes on ventures with certainty of successful outcomes. Knight introduced uncertainty to the reality affecting the choice architecture for Schumpeter's entrepreneur. This perspective adds clarity to the reasons underlying entrepreneurial profits and losses as well as successes and failures.¹¹ Von Mises observed that without uncertainty there is no room for profits because all input prices would reflect the full value of the final product.¹² Neoclassical economics focuses on equilibrium, but entrepreneurship is about disrupting equilibrium, which leads to profit-making opportunities. According to Kendall, Von Mises was "concerned with the unfolding of the market process as it occurs under conditions of market disequilibrium... driven by entrepreneurial action under radical uncertainty and im-

perfect knowledge."¹³

The reality of uncertainty is one reason why the neoclassical economic literature founded on the assumption of *homo economicus* does not explain entrepreneurial activities well.¹⁴ Because of cognitive, social and time constraints, entrepreneurs cannot make optimal decisions under uncertainty. In response, Simon introduced the first behavioral model where he combined the terms "sufficing" and "satisfying" to create "satisficing" as a more realistic decision rule to replace utility maximization under the rational-agent model. Labeled the model of *bounded rationality*, the rule suggests that people make decisions that are "good enough" given the constraints faced rather than optimizing with perfect information.¹⁵

Under bounded rationality, entrepreneurs employ heuristics (i.e., rules-of-thumb) when faced with uncertainty to simplify decision making. The Nobel-Prize winning research of Kahneman and Tversky demonstrated that people use heuristics to arrive at decisions based on factors that economists traditionally do not consider, such as fairness, past events, and aversion to loss.¹⁶ Heuristics, however, often lead to cognitive biases that result in sub-optimal outcomes. Some cognitive biases are particularly risky for entrepreneurs. The *endowment effect*, for example, occurs when people put higher value on items they already own than they would otherwise be willing to pay for it. This would make it difficult for entrepreneurs to dispose of resources that are no longer serving the best interests of the company.¹⁷ Similarly, the *sunk cost fallacy* may keep them attached to the status quo because they feel they have already invested so much. Ideally, because sunk costs are sunk, current decisions should only consider the incremental benefits from any new investments.

RISK TOLERANCE

Knight was careful to sharply distinguish between the concepts of uncertainty and risk. Risk is calculable *a priori* and can, therefore, be treated as a cost. Uncertainty, in contrast, is unquantifiable.¹⁸ Given the uncertainty entrepreneurs face, it would be reasonable to expect that they are more prone to assume risk. The evidence however is inconclusive, perhaps because of the inconsistency in the way entrepreneurs are classified in different studies.¹⁹ One meta-analysis did find that growth-oriented entrepreneurs exhibited higher risk-taking propensity compared to those classified as family-income oriented entrepreneurs. Also, a higher *risk tolerance* is observed in the opportunity-driven (vs. necessi-

ty-driven) entrepreneurs.²⁰ Adam Smith also surmised that age may have something to do with how people weigh risks. He writes, "The contempt of risk and the presumptuous hope of success, are in no period of life more active than at the age at which young people choose their professions."²¹

PATIENCE AND REDUCED TIME PREFERENCE

A lower time preference means a willingness to postpone gratification and is characteristic of successful entrepreneurship. Empirical evidence suggests a close relation between time preference and national income. In a large cross-national study, Dohmen et. al. found that average patience explains about 40 percent of the between-country variation in income.²² Patience affects national income through accumulation processes. It is strongly correlated with human and physical capital accumulation, investments in productivity, and institutional quality. Matthews found that entrepreneurs at the individual level are displaying the kind of patience and ability to think long-term that is needed to sustain progress when they contemplate starting a business.²³

OPTIMISM

Time preference, risk taking, bounded rationality, and innovativeness describe a personality profile shared by most new business owners. A stable personality trait that sheds light on why entrepreneurs tend to persist even in times of difficulty and their bias for action is optimism and its correlate, *overconfidence*. Overconfidence and "endemic optimism" pervade the startup world. Evidence suggests that extreme optimists are more likely to make high-risk and even imprudent financial choices. They are also more likely to keep pursuing an idea even with little chance of success, and thus to incur higher losses.²⁴

Identity economics postulates that we take into account our identity when making decision in addition to monetary incentives.²⁵ It is possible that rather than continuing on in

the face of challenges due to optimism, the entrepreneur may be doing so to perpetuate his/her identity as an entrepreneur. Overconfident leaders also easily succumb to *confirmation biases* where information that contradicts preexisting beliefs are discounted when making decisions. Such behaviors inevitably lead to suboptimal choices.

BIBLICAL INTERPRETATIONS AND APPLICATIONS

God, being the creator of all things, is the ultimate source of all creativity. Humankind, being made in the divine image or *imago Dei*, is called into a life of purpose in which our

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creativity would be harnessed to sustain human flourishing. Os Guinness describes the entrepreneur as "one who assumes the responsibility for a creative task as a *venture of faith*, including risk and danger in order to bring into the world

something new and profitable to humankind."²⁶ Christians have a unique eternal calling to count for good in God's great universe,²⁷ and entrepreneurship is where our endowed creativity makes it profitable as a faith-driven venture to do God's will on earth.

Although the Bible is not a treatise on entrepreneurship or economics, the wisdom contained therein has direct application to all human enterprises. In the remaining pages we focus our biblical perspectives on the five signature elements of entrepreneurship alluded to in the previous section: innovation, decision-making under uncertainty, risk taking, time preference, and optimism. The discussions emphasize the context of faith-driven entrepreneurs. In the summary table, at the end of the article, implications for business operators regardless of faith orientation will be suggested.

INNOVATION

Schumpeter referred to the entrepreneur as an innovator who breaks up established routines and introduces new

ways of doing things.²⁸ While being a creative non-conformist, the entrepreneur can be reluctant to abandon a strategy or course of action simply because of an emotional attachment to investments already made. Known as the *sunk-cost fallacy*, this behavior impedes breakthrough discoveries and process improvements. It could weaken enterprise competitiveness or dash hopes at critical junctures when pivoting to new strategies may be in order.

Jesus' parables on the old garment and wineskins illustrate the incompatibility of old form and new substance.²⁹ To overcome negative emotions associated with breaking from the status quo, leaders need the discipline to constantly re-examine existing assumptions, engage new perspectives, and think "outside of the box." Covey writes, "To be successful we must live from our imaginations, not from our memories."³⁰ Even when adopting new rules and processes, cultivating a new culture or engaging new talents, we cannot simply conform to what is "common and normal" in society. As Paul advises in Rom. 12, we must "test and approve" new realities in order to conform to the will of God by means of "renewing" our mind. Christian entrepreneurs need to adopt a new perspective with the mind of Christ when they evaluate possibilities.³¹

In God's economy the products of creation (innovations) are meant to be "good." In Genesis 1:31 ("And God saw all that He had made, and behold, it was very good"), the word "good" is "tov" in Hebrew, which means to be *in harmony with God*. Innovative efforts are meant to be conducive to God's purpose for the creation, including the goal of human flourishing. This "in harmony with God" criterion can be a useful filter when too many choices invite unhappiness and decision fatigue. *Choice overload* often confronts entrepreneurs embarking on new ventures or seeking to pivot from existing strategies. A laser focus on God's will and an identity in Christ as faith driven entrepreneurs empower leaders to reject objectionable compromises on biblical or ethical standards. Compromises are alluring as entrepreneurs attempt to chase fleeting market opportunities or safeguard competitiveness amidst shifting socioeconomic or cultural norms.³²

The biblical story of the Tower of Babel (Gen. 11:1-8) offers a fascinating tale of human innovativeness and God's partnership in successful ventures. From the start, this grandiose, "East of Eden" undertaking is a failed test under the "in harmony with God" criterion at two levels: first it goes against God's instruction which was for Noah's descendants to "spread out and fill the earth" (Gen. 9:1), instead of settling down and averting being scattered (Gen. 11:4-5). Second, the

motive behind this enterprising effort was men's, not God's, glory (Gen. 11:4).³³ Every human endeavor that conforms to God's goodwill will be blessed; those that don't will be frustrated.

The good news from the account of Babel is that humans, who bear the image of God, are endowed with imaginations and creativity that know no boundary (Gen. 11:6). It is also clear that there is power in unity when a team (a people) shares the same vision and motivated by the same goal. Leveraging human creativity and unity in vision and commitment should be at the center of every young enterprise's growth strategy. A mission driven organization should develop resources where these competencies are empowered. When it comes to celebrating the accomplishments in life or in business, however, it is equally important to remember these are monuments of God's greatness, not altars of worship for human intelligence.

DECISION UNDER UNCERTAINTY

Entrepreneurs are often driven by the appeal of ideals and subjective values such as "control over one's life" and a "sense of purpose," or biases such as "some of my friends' success story" and "what I'm always good at."³⁴ The high rate of entrepreneurial failures can be attributed to various cognitive biases that affect decisions made under uncertainty.³⁵ As discussed above, Tversky and Kahneman suggested that decisions made under uncertainty are often made using heuristic (i.e., rule-of-thumb) principles. These decision rules, such as *representativeness*, *availability*, *adjustment* and *anchoring*, could be effective and economical, but they often lead to systematic and predictable errors.³⁶

A case in point is the classic biblical example of Eve's fall in Gen. 3:1-7. Although Eve might have strong conviction of God's command about not eating from the fruit of the tree in the garden, she did not have experiential data to support it. She had not tasted the fruit nor experienced the consequence of such disobedience. The first piece of information she received relating to this experiment was from the Serpent, who craftily dismantled her belief by contrasting the appeal of "be like God" against "the death" which "will not" occur (Gen. 3:4-5). Eve's subsequent, skewed judgment emanates from this new reference or "anchor" (*anchoring bias*): "thus when she saw that the tree was good for food, and that it was a delight to the eyes, and that the tree was desirable to make one wise, she took some of its fruit and ate" (Gen. 3:6-7). In this instance the sensory impulses offered a vivid, delightful alternative and the desire to be like God appealed to the surreal excitement of being a deity. From a hu-

man standpoint these appeals offered easy choices because they spring from learned associations and (flawed) intuitions (*availability bias*).

Kahneman suggests that to overcome availability bias one needs to activate “System 2” thinking – activation of the mental network that is engaged in deliberative, careful and reflective decision making.³⁷ Similarly, to combat anchoring biases one must take the time to deliberately evaluate alternatives and re-examine assumptions stemming from intuitions. In other words, evidence and awareness are key to discriminate choices. The wisdom literature in the Bible repeatedly reminds us about the need to gain knowledge and seek wise counsels in making judicious decisions.³⁸ Eve could likely have benefited from the counsel of Adam before making the rash decision, and definitely from the counsel of God if she chose to consult her maker. Jesus teaches that believers must be “shrewd as serpents and as innocent as doves” (Mt. 10:16). While living in a complex world filled with deceptive and misleading guidance, prudence and simplicity would help steer us to the right choices.³⁹

For faith-driven entrepreneurs, the story of Elijah after his exhilarating victory over the Baal priests on Mt. Carmel offers some general principles for making decisions under uncertainty when one must confront the choices alone (1 King 18:20-19:18). Elijah was quick to choose a gamble on life by fleeing when threatened by Jezebel, yet he was not hesitant to choose probable death when he confronted the false prophets on Mt. Carmel just a short while ago.⁴⁰ Informed judgment and human emotions are in full display in Elijah’s experience. Here we can discern a few helpful practices to avoid emotionally driven decisions:

1. **Humility** – Elijah’s God-ordained triumph had fostered a pride that made him take his own importance too seriously (cf. 1 King 19:10, 14). Patterson commented, “He [Elijah] had come to bask in the glow of the spectacular. He may have fully expected that because of what had been accomplished at Mount Carmel, Jezebel would capitulate and pagan worship would come to an end in Israel – all through his influence!”⁴¹ Removing this blinder of anchoring, that is, relying too much on prior or preexisting information (namely his success against the Baal priests), could give him a clearer head and more rational response.

2. **Shalom** – Elijah’s self-justified righteousness has landed him on restlessness and despondency, and

God’s solution is to “send him back” (1 King 19:15) to where he must face the turmoil and rejection. That is where he shall find reconciliation or peace. Entrepreneurs must make decisions where they can reconcile their inner conflicts with reality (a state of *cognitive dissonance*), and their bitterness and doubt with God’s assurance and blessing. Shalom is the therapeutic recipe for rashness that springs from an unwillingness to confront the facts or the discomfort of difficult choices. St. Augustine of Hippo described “peace” as “the tranquility of order.”⁴² In Elijah’s case, it is the psychological order of obedience flowing from the peace of God.

3. **Rest** – Resting allows us to quiet ourselves before God and revives our minds, bodies, and spirits. Rest restores and relieves body, mind, and soul overwrought from various burdens. Jesus assures us that he would give rest to those who labor and are heavy laden (Mt. 11:28), and God says, “In returning and rest you shall be saved” (Isa. 30:15). Elijah was so exhausted (physically and spiritually), distressed and despondent that he wanted to die (1 King 19:4). Angels ministered to him and revived him with life’s nourishment instead. Indeed, for Elijah as well as the exhausted, apprehensive Christian entrepreneur who must make decisions in a vacuum of facts and alternatives, “the journey is too much for you” (1 King 19:7). God’s prescription is rest to restore our strength and soul.

4. **God in the small voice** – rash decisions are often made in the clatter of noises and misinformation. Decision fatigue potentiates impulsivity, attentional deficits, and an inability to exercise self-control. God revealed himself to Elijah in the most unexpected fashion – in the still small voice that was least expected (1 King 19:13). God’s message and instruction sometimes come in the least expected places. It reminds us that “it is not by might, nor by power, but by my [God’s] spirit” (Zech. 4:6) that we can find missing opportunities and success. In business, even some of the greatest accomplishments were achieved by attention to the small things and details, and from the most neglected places.⁴³ It takes discernment and a will of persistence to be attuned to God’s instructions and unexpected discoveries.

RISK TAKING

Existing evidence largely supports Knight's speculation that entrepreneurs would be more inclined to take opportunities despite potential risks. Successful entrepreneurs would be those with the most balanced risk judgments. The fact that many entrepreneurs seem to enter and persist in the venture despite earning low risk-adjusted returns suggests that there are non-pecuniary rewards (utility) accruing to entrepreneurship.⁴⁴ Weber suggested that, historically, there is an "elective affinity" between Protestantism's thrift, hard work, and ascetic lifestyle and capitalistic triumphs.⁴⁵ This lifestyle is conducive to business success, while perseverance in entrepreneurial ventures earns the coveted reassurance of God's grace.⁴⁶

Mission driven Christian entrepreneurs are also more willing to take risk because they have walked a life journey of faith. Faith is a type of spiritual capital as opposed to intellectual or physical and financial capital. It is nevertheless equally if not more important in building healthy organizations. Companies that build spiritual capital are vision and value led, which in turn promotes organizational identity.⁴⁷ Greear suggested that "God delights in those who risk greatly for him," and even the absence of a divine promise of success is not "supposed to discourage us from taking wise, well-calculated risks."⁴⁸

Bernstein, while commenting on the historic contribution of Swiss mathematician Bernoulli on risk, observed that⁴⁹

any decision relating to risk involves two distinct and yet inseparable elements: the objective facts and a subjective view about the desirability of what is to be gained, or lost, by the decision. Both objective measurement and subjective degrees of belief are essential; neither is sufficient by itself.

The objective measurement refers to the ability to ascertain the likelihood of occurrence (or probability) of a certain event. It is a function of *information quality*, or knowledge. The subjective deliberation is shaped by beliefs such as trust and accountability. The Christian entrepreneur can benefit from the resources in a faith community where the sharing of life experiences and reciprocal learning in a trusting environment contributes to risk reduction.⁵⁰ In such a community, quality information (learning) and wisdom can be gained by consultation with a multitude of counselors, as the Scripture advises.⁵¹ In addition, trust and trustworthiness increase when

individuals are closer socially. Social cohesion is a prominent attribute of faith communities where people share a strong sense of moral purpose, core value, and vision.⁵²

The perspective on accountability is influenced by our identity. It changes when we assume the identity of stewards, not owners, of the resources God has committed to our trust. Risk is a powerful deterrent to action because losses loom larger than gains (*loss aversion*). This disincentive is more poignant in the case of the entrepreneur because he "owns" the financial and sweat equity. Kaestner suggested that "When we turn ownership over to God, we are freed from the pressures of performance and we experience joy from working alongside God."⁵³ In Jesus' parable of the talents (Mt. 25), the "lazy" servant was punished not for the project's outcome but for his deficient stewardship of the master's resources.⁵⁴ Taking calculated risk can be an exciting and rewarding experience if we partner with God, the true owner of the resources we must commit.

Risk taking means greater likelihood of failure and raises the *fear* of loss. Yet risk taking is essential for succeeding in competitive environments. It contributes to a habit that enhances confidence. Overcoming fear is thus essential for project success. Byrd suggests that to overcome the fears in personal risk taking, the best approach is modeling – showcasing exemplary behavior by a trustworthy role model that could dispel such fears.⁵⁵ In Mt. 14:22-33, Jesus exemplifies the perfect role model when he invited Peter to walk to him on the water. This episode demonstrates several key elements in dealing with the fears of risk taking:

1. **Encourage risk taking but not recklessness.** Jesus said to the frightened disciples when they mistook him for a ghost, "It is I, do not be afraid," to which Peter responded with "'Lord, if it is you, command me to come to you on the water.' And He said, 'Come'" (vv. 27-28). Jesus assured Peter that coming to him in spite of the risk is an attainable, worthy goal. Taking risk is not gambling. There must be a worthy reward that justifies the probability of success.

2. **Encourage the positive.** Jesus approved of Peter's confidence and reinforced Peter's faith. When he reached out and rescued him from near drowning, Jesus shows Peter he has just accomplished a big leap in his faith. Completion of the journey is a psychological and spiritual reward for Peter.

3. **Accept mistakes and be supportive.** Jesus' rebuke of Peter was meant to show the other disciples what they have missed – a subject lesson that consistent confidence in Jesus is absolutely necessary to overcome life's storms. Team members should learn from each other's mistakes, and leaders are wise to provide a support structure where reciprocal learning is encouraged.

4. **Provide a non-punitive environment.** Peter was not punished but instead encouraged to gain faith. Peter would have succeeded if he had enough faith, a transformative power that propelled him to the top leadership of the early church and sustained him through the subsequent trials.

TIME PREFERENCE

The entrepreneur is a long-term thinker, which necessitates the renunciation of present desires for long-term benefits. *Patience* is a manifestation of faith and a fruit of the spirit.⁵⁶ It connotes endurance and steadfastness. To lead a life worthy of the calling, the entrepreneur has to display initiative, motivation, sacrifice, and self-control. These are qualities that can dissipate over time unless one has confidence in the reward of that distant vision and the cause for *perseverance*.

For the entrepreneur who trusts God as his business partner and renders the venture an answer to the high calling of good work, perseverance is not a dreadful but a welcoming experience. Perseverance, according to Scripture, is a conduit to "proven character" (Rom. 5:4), "doing good" (Rom. 2:7, Gal. 6:9), "the will of God" (Heb. 10:36), an assuring "hope" (Rom. 8:25, 15:4), or "an eternal Kingdom" (2 Pet. 1:6). Regardless of the economic return, patience and perseverance would constitute the necessary ingredients in the recipe for success in a mission.

The lack of patience is manifested in the urge to take action, particularly among over-confident leaders, which describes many entrepreneurs. One famous venture capitalist, when asked what he usually looks for in a new venture, noted three attributes that stood out: (1) a sense of urgency, (2) a conviction that the idea will work, and (3) a bias for action⁵⁷ – all reflecting time-sensitive behavior. The tendency to favor action over inaction, often referred to as the *action bias*, may not lead to favorable outcomes when there is missing supportive evidence or solid rationale. Impulsive behavior could be driven by cognitive biases such as *herd mentality* or *information avoidance* (i.e., the shunning of information in fear of

it threatening existing beliefs). It is always prudent for Christian leaders to seek counsel or God's guidance (knowledge) through prayer before jumping into action (Prov. 13:16).

One of the most illustrative biblical lessons on patience and the reward of waiting is found in Gen. 29, where Jacob sealed a forward contract with his uncle Laban to exchange years of hard work for the right to marry his beloved bride, Rachel. The biblical account offers three important lessons which are valuable for the business leader regardless of the faith orientation:

1. **Vision** – "Where there is no vision, the people are unrestrained" (Prov. 29:18). The original text here refers to a divine revelation and not individual goals, but it does serve to remind leaders that, according to Mayo, "The ability to visualize and articulate a possible future state for an organization or company has always been a vital component of successful leadership."⁵⁸ For Jacob, the future state is envisioned as one where he will be the father of a great people right there in Bethel, as God promised (Gen. 28:15). A vision gives a sense of purpose, crystallizes choices, and is a great motivator. For most people, when the circumstance is pressing and confidence is tested, the uncertainty of a distant future has the ability to crowd out trust, even divine promises, and magnify the appeal of instant gratification.⁵⁹ In contrast, the anxious anticipation of a forthcoming joy could render patient waiting a thrilling experience. Indeed, because of his love for Rachel, Jacob is said to have endured the seven long years as if they were nothing but a few days (Gen. 29:20).

2. **Value** – Time and patience are great tests of character. Jacob was wronged because of Laban's trickery (Gen.31:6-7), but he was not rancorous or revengeful. On the contrary, he consistently demonstrated faithfulness, trustworthiness, integrity and self-control in his stewardship. When Laban rejected Jacob's plea to leave, Jacob reminded Laban that he had always been a dependable and faithful servant in spite of the fate he was dealt. Jacob's consuming passion for the collective good led him to enjoy a purpose driven life. As Paul says, "Godliness with contentment is great gain" (1 Tim. 6:6). The greatest gain is the ability to enjoy whatever God has given us while awaiting the fulfillment of our dreams.

3. **Vigilance** - God uses journeys of life to mature us spiritually and professionally, and it often takes time. This behooves us to be alert to opportunities – opportunities for reflective learning as well as reactive choices. God uses Laban to teach Jacob a great lesson about deception, of which he is a skilled practitioner.⁶⁰ C.S. Lewis wrote, “Failures, repeated failures, are finger posts on the road to achievement. One fails forward toward success.”⁶¹ This is true if one can reflect on past missteps and learn from them. It is equally important to be attuned to life’s turning points. In Acts 13, Paul made a strategic pivot to the Gentiles after he had been patient with the Jews, launching the great missionary ministry. For Jacob, he devised a plan of optimal quitting where he executed a wealth building strategy while plotting his final escape (Gen. 30:37-43). Vigilance could be the missing link between patient waiting and the final realization of its payoff.

OPTIMISM

“Optimism,” wrote Helen Keller, “is the faith that leads to achievement.”⁶² Optimism is a pervasive trait of entrepreneurs, yet most startup ventures fail.⁶³ This is often attributed to the observation that optimism, which can be defined as the tendency to perceive an event or action as more likely to end in a favorable outcome, has the potential to lead to unwanted results. Research also reveals that optimism and *overconfidence* are closely related and are likely to appear jointly.⁶⁴ Overconfidence, which can be defined as the tendency to overestimate the probability of achieving one’s objectives, is a likely cause of excessive risk-taking.⁶⁵

It is interesting to note, however, that there is some evidence to suggest that more precise beliefs, such as those based on observed facts or promulgated practices, could lead to a reduction in overestimation.⁶⁶ Protestant theologians such as Calvin and Luther praised business success, which they interpret as a sign of God’s favor. By stressing thrift, hard work, and an ascetic lifestyle, laymen who followed these theologians’ lifestyle advice actually enhanced their chances of obtaining success in business.⁶⁷ Hypothetically, Christians who pursue entrepreneurship in the belief that their mission is to seek a state of excellence in which they experience fulfillment and advance human flourishing, are more inclined to persist despite suboptimal economic

returns. Empirical evidence that links economic growth and social progress to Christian entrepreneurship offers some support to this conjecture.⁶⁸

Optimism and overconfidence affect perception of circumstances and decision choices in nuanced ways. We will highlight two illustrations from the Bible that offer insights on ways to cope with cognitive biases associated with optimism and overconfidence. The first is Jesus’ parable on the rich fool (Lk. 12:13-21). The second is the reactions of the twelve Israeli spies who were sent out by Moses to scope out the land of Canaan which God had promised to give to the sons of Israel (Num. 13). Our discussion will spotlight three strategies:

1. **Emotional intelligence and gratitude** – optimism and overconfidence often lead people to overemphasize dispositional factors (e.g., our own skills) and discount the role of situational factors. The rich fool in Jesus’ parable attributed good outcomes to his own skill and diligence and dismissed the favorable environment (God’s providence) over which he had no control. Known as the *fundamental attribution error*, this is a common peril amongst high achieving self-starters such as entrepreneurs. Eisenman observed that many venture capitalists believe (falsely) a talented jockey (the entrepreneur) is fundamentally more important to the success of the venture than a fast horse (the opportunity or environment), leading to an underemphasis of situational factors.⁶⁹

An egocentric personality such as the rich fool can only see the world from his own perspective. He also likely suffered from a lack of self-control, patience, and tolerance for frustration and complexity. Overcoming attribution biases requires the cultivation of emotional intelligence and a grateful attitude.⁷⁰ Our emotions reflect our values, and the Bible is abundantly clear about the purpose of everything that happens in life - to draw us closer to, and to make us become more dependent on God. Paul puts this most aptly in this instruction: “Rejoice always, pray without ceasing, in everything give thanks; for this is the will of God for you in Christ Jesus” (1 Thess. 5:16-18).

2. **Awareness of true identity** – Akerlof and Kranton suggests that a person’s concept of self (or identi-

ty) directly impacts economic choices and outcomes, holding monetary incentives constant.⁷¹ *Identity economics* demonstrates external influences (such as social status) on behavior at the individual and even organizational levels. The rich fool in Jesus' parable has his identity locked up in his imagination as a landed aristocracy who does not need to labor any longer. He has taken God's blessing as a ticket to idleness and an excuse to refrain from investing in better opportunities when they present themselves.

If our identity is defined by earthly treasures, then as Jesus concluded, "where your treasure is, there your heart will be also" (Lk. 12: 34). If we identify as a hard charging, visionary innovator and wealth builder, we may pursue speculative opportunities with gusto and recklessness. Yet if we identify as a prudent steward of God's resources we will go after promising ventures that seek the common good for His glory. As Kaestner observed, "The only way to experience life as an entrepreneur in the way God designed it is to place our entire identity in him and to view ourselves as stewards of whatever he has put in our hands."⁷² Our worth in God's eyes and his rewards (here and later) can be strong performance incentives.

3. Sowing doubt and building trust – Entrepreneurs are uniformly driven and goal focused. Their tendency to employ heuristics to simplify decision making in complex environments makes them particularly susceptible to *confirmation biases* – the likelihood of identifying, processing, and acting upon only information that is consistent with preconceptions and harbored beliefs.⁷³ The inability or unwillingness to evaluate presuppositions and conduct proper due diligence can lead to serious misjudgments. In the case of the twelve Israeli spies the collected evidence confirmed the goodness of the land, but the ten naysayers gave greater credence to information that fits with their preconception and belief – a fear of the Anakims blown out of their diminished self-image, as they confessed, "we were like grasshoppers in our own sight, and so we were in their sight" (Num. 13:33). The pessimism (or optimism) driven by confirmation biases can be contagious and infect organization identity, as witnessed by the reaction of the entire Israeli congregation when they listened to the

spies' downbeat report (Num. 14:1-4).

The tyranny of confirmation biases lies in the artificial suppression of information that may sow doubt in our mind. Our willingness to selectively interpret available data also suggests that the level of trust we place on the source of information affects our vulnerability to such mistakes. Because preconceptions are shaped by remembered experiences, trust can be built upon past successes or failures.

In the spy story of Numbers 13 and 14 the evidence in support is indisputable (e.g., "the huge clusters of grapes," "a land of milk and honey") but it was supplanted by an imagined "land that devours its inhabitants" (Num. 13:32). Even though God has never failed in delivering his promises to the sons of Israel during their exodus journey, this remembered experience was obscured by the unnatural fear of "why is the Lord bringing us into this land to fall by the sword" (Num. 14:3)? The spies' and the assembly's presumptions need to be challenged. A willingness to sow doubt is fundamental to the integrity of any informed decision. The ability to build trust is needed to mitigate arbitrary interpretations based on human emotions such as fear. For Christians our confirmation needs to be biased heaven-ward, as C.S. Lewis wrote, "Aim at heaven and you will get earth thrown in. Aim at earth and you get neither."⁷⁴

► CONCLUSIONS

As economic agents, entrepreneurs cannot optimize individual or social welfare because they are innovators in a market that is fraught with uncertainty and imperfect information. Yet entrepreneurs continue to be a prime mover of a vibrant economy by entering and persisting in markets in spite of increased odds of failure. We examine behavioral characteristics that strongly impact entrepreneurial performance such as innovativeness, decision making under uncertainty, risk taking, reduced time preference, and optimism. Cognitive biases associated with these attributes are often the reasons why entrepreneurs make sub-optimal decisions and even fail.

We seek better understanding of these biases from Scripture and find that God's word has much to say about these behavioral challenges. Table 1 summarizes the biblical insights and their possible applications to business settings.

Many of these strategies apply equally well to Christian and non-Christian business operators. However, faith-based business leaders have the advantage of borrowing from a toolkit that is uniquely crafted to improve outcomes consistent with the purpose of their calling. As Kaestner wrote, "Entrepreneurs aren't God's plan B. Rather they are the men and women God has called and equipped to see his will done on earth as it is in heaven."⁷⁵

There are three directions where future research can take us. The first is to expand the scope of this analysis to incorporate other challenges that are left out of the present study. For example, scaling is an important concept in entrepreneurial sustainability. Ethical dilemmas, especially relevant

in today's compromising cultural environments, constitute another. A second direction is to validate the findings in this paper with empirical results, using surveys that measure the effectiveness of these practices in actual settings. A third direction is to gain a better picture of the behavioral and performance differentials between Christian and non-Christian startups, and to attempt a validation of Weber's hypothesis, perhaps across national boundaries if data can be acquired.⁷⁶



TABLE 1
SUMMARY OF ENTREPRENEURIAL BEHAVIORS, BIBLICAL INSIGHTS AND APPLICATIONS

ATTRIBUTE	BEHAVIORAL ISSUES	BIBLICAL INSIGHTS	BUSINESS APPLICATIONS (INDEPENDENT OF FAITH ORIENTATION)
INNOVATIVE-NESS	Sunk cost fallacy	<ul style="list-style-type: none"> New wine needs new wineskins (Mt. 9:14-17) Test and approve new realities by renewing our mind (Rom.12;2) 	<ul style="list-style-type: none"> New direction demands paradigm changes Adopt new perspectives; test assumptions; be inspired
	Choice overload	<ul style="list-style-type: none"> Apply "in harmony with God" criterion (Gen. 1:31, 11:1-8) Pursue God's glory, not man's greatness (Babel account, Gen. 11:1-8) 	<ul style="list-style-type: none"> Look for the greater good; seek fulfillment that advances human flourishing Be cautious with anything that brings too much attention to the leader
DECISION UNDER UNCERTAINTY	Anchoring/ Availability bias	<ul style="list-style-type: none"> Seek multiple wise counsels (Prov. 1:5, 11:14, 12:15) 	<ul style="list-style-type: none"> Seek advice from trustworthy and honorable counsel Question intuitions and seek supporting evidence for assumptions Use prudence and practice reflective decision making
	Pride (prior success)	<ul style="list-style-type: none"> Practice humility (Elijah's teachable moments, 1 King 19) 	<ul style="list-style-type: none"> Avoid dwelling on the glow of success Elevate others

TABLE 1 CONTINUED ON NEXT PAGE

TABLE 1 (CONT'D)
SUMMARY OF ENTREPRENEURIAL BEHAVIORS, BIBLICAL INSIGHTS AND APPLICATIONS

ATTRIBUTE	BEHAVIORAL ISSUES	BIBLICAL INSIGHTS	BUSINESS APPLICATIONS (INDEPENDENT OF FAITH ORIENTATION)
	Cognitive dissonance	<ul style="list-style-type: none"> Confront reality and pursue shalom (1 King 19:15) 	<ul style="list-style-type: none"> Seek inner peace and peace with others; avoid contentions
	Fatigue (physical & spiritual)	<ul style="list-style-type: none"> Rest (Isa. 30:15) 	<ul style="list-style-type: none"> Rest and take refreshing journeys that will replenish physically, emotionally, and spiritually
	Decision fatigue	<ul style="list-style-type: none"> Attune to God’s “small voice” and seek His spirit (1 King 19:13, Zach. 4:6) 	<ul style="list-style-type: none"> Pay attention to surprise outcomes from unexpected times and places Look out for the “ah ha” moment
RISK-TAKING	Risk tolerance (for right motives)	<ul style="list-style-type: none"> Gain faith (Exo. 2:1-10, Mt. 25:16, Mt. 21:21) 	<ul style="list-style-type: none"> Acquire spiritual capital and build a corporate culture of trust and integrity
	Information quality (or the lack of)	<ul style="list-style-type: none"> Seek wisdom and knowledge (Prov. 1:5, 15:22) Join faith communities and learn reciprocally (Prov. 27:17; Mt. 18:20) 	<ul style="list-style-type: none"> Invest in information gathering and training that develop unity, skills and vision Join communities with like-minded, trustworthy leaders
	Loss aversion	Practice accountability as faithful steward (Mt. 25:24-30)	<ul style="list-style-type: none"> Cultivate a stewardship climate
	Fear (from risk taking)	Learn from Jesus as role model (Mt. 14:22-33): <ul style="list-style-type: none"> encourage risk taking, not recklessness reinforce the positive learn from mistakes and be supportive in failures provide a non-punitive environment 	Jesus is still the role model: <ul style="list-style-type: none"> learn to encourage taking calculated risks reinforce the positives be supportive in failures provide a non-punitive work environment

TABLE 1 CONTINUED ON NEXT PAGE

TABLE 1 (CONT'D)
SUMMARY OF ENTREPRENEURIAL BEHAVIORS, BIBLICAL INSIGHTS AND APPLICATIONS

ATTRIBUTE	BEHAVIORAL ISSUES	BIBLICAL INSIGHTS	BUSINESS APPLICATIONS (INDEPENDENT OF FAITH ORIENTATION)
TIME PREFERENCE	Patience	<ul style="list-style-type: none"> Cultivate Christ-like character and fruit of the Spirit (Gal. 5:22) 	<ul style="list-style-type: none"> Practice patience and self-control; take a long-term view
	Action bias	<ul style="list-style-type: none"> Seek multiple wise counsels (Prov. 1:5, 11;14, 12:15) Gain knowledge (Prov. 13:16) 	<ul style="list-style-type: none"> Seek multiple advises from trusted counsels before action; Seek complete information; Refrain from impulsive behaviors
	Perseverance	<ul style="list-style-type: none"> Lessons from Jacob in Haran (Gen. 29): Driven by vision (Prov. 29:18); Live in contentment with Godly values (1 Tim. 6:6) Be vigilant for pivoting opportunities (Acts 13:46, Gen. 31:13) 	<ul style="list-style-type: none"> Develop a vision and pursue it with a consuming passion Be content with each given moment Persist with integrity and self-control Look out and plan for pivoting opportunities when they arrive
OPTIMISM	Attribution bias	<ul style="list-style-type: none"> Cultivate emotional intelligence and an attitude of gratitude (1 Thess. 5:16-18) 	<ul style="list-style-type: none"> Practice self-awareness, empathy, and social skills Rejoice always Be appreciative and contented in every circumstance
	Identity economics	<ul style="list-style-type: none"> Affirm an identity in Christ and as faithful steward of His resources (Lk. 12:34) 	<ul style="list-style-type: none"> Keep a stewardship mindset Be faithful to stakeholders and put their needs above everything else
	Confirmation bias	<ul style="list-style-type: none"> Sow doubt (on preconceptions) and build trust (based on prior successes or solid intelligence). Lessons from Num. 13 	<ul style="list-style-type: none"> Question presuppositions and conduct serious due diligence before decision Trust lessons from prior experiences

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- ³² A case in point is the raging tide of corporate and regulatory mandates on ethical and social issues such as the sanctity of life and certain aspects of DEI (diversity, equity and inclusiveness) which many evangelical Christians deem incompatible with biblical values.
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- ³⁴ These are commonly referred to as the representative (fitting a preconceived stereotype) and availability (what easily comes to mind) biases, respectively.
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- ⁵¹ See, for example, Prov. 1:5, 15:22.
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- ⁵³ Kaestner, Greear, and Ingram, *Faith-Driven Entrepreneur*, 33.
- ⁵⁴ Matthew Wilson, "Taking Ownership While Giving Glory to God," *Christian Business Review* No. 8 (2019), 31.
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