Human and Cultural Dynamics in Digital Business Incubation: Toward Sustainable Entrepreneurship under Vision 2030

Dr. Majed Abdullah Bin Othayman:[1] *Ph.D Assistant Professor, King Khalid University, Asir Region, Saudi Arabia.*

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Abstract :

This study explores the impact of human and cultural dynamics on the performance and sustainability of digital business incubators (DBIs) in Saudi universities within the framework of Vision 2030. Using qualitative, exploratory methods, the research identifies leadership, motivation, teamwork, and cultural readiness as critical enablers of innovation. The findings highlight that sustainable digital incubation requires the synergy of human excellence and cultural adaptability. This alignment transforms Vision 2030's national aspirations into practical organizational outcomes, creating a generation of entrepreneurs equipped to drive Saudi Arabia's digital economy forward.

Key words**: **Digital Business Incubation**, **Human Factors**, **Cultural Dynamics**, **Vision 2030**, **Saudi Arabia**, **Leadership**, **Innovation

JEL Codes Classification: L26, O33, M13

[1]- المرسل، ***Dr. Majed Abdullah Bin Othayman*** malothayman@kku.edu.sa

الديناميكيات البشرية والثقافية في حاضنات الأعمال الرقمية: نحو ريادة أعمال مستدامة في ظل رؤية 2030

د. ماجد عبد الله بن العظيمان [1]: أستاذ مساعد، جامعة الملك خالد، المملكة العربية السعودية.

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الملخص:

تستكشف هذه الدراسة أثر الديناميكيات البشرية والثقافية على أداء واستدامة حاضنات الأعمال الرقمية في الجامعات السعودية في إطار رؤية 2030. وباستخدام منهج نوعي استكشافي، تحدد الدراسة القيادة، والتحفيز، والعمل الجماعي، والاستعداد الثقافي بوصفها عوامل تمكينية أساسية للابتكار. وتُبرز النتائج أن الاستدامة في الاحتضان الرقمي تتطلب تكاملاً بين التميز البشري والقدرة على التكيف الثقافي. ويسهم هذا التوافق في تحويل الطموحات الوطنية لرؤية 2030 إلى نتائج تنظيمية عملية، بما يساهم في إعداد جيل من رواد الأعمال القادرين على دفع عجلة الاقتصاد الرقمي في المملكة العربية السعودية إلى الأمام.

الكلمات المفتاحية :حاضنات الأعمال الرقمية، العوامل البشرية، الديناميكيات الثقافية، رؤية 2030، المملكة العربية السعودية، القيادة، الابتكار.

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[1]- المرسل، *Dr. Majed Abdullah Bin Othayman* malothayman@kku.edu.sa

Introduction:

Digital transformation is transforming the way businesses work all over the world and making digital entrepreneurship a big part of social and economic growth (Elia et al., 2020; Kraus et al., 2022). Digital business incubators (DBIs) are becoming an important part of helping new businesses get off the ground by giving them access to technology, mentors, and networks of innovators (Malkawi et al., 2024). In Saudi Arabia, digital business incubators (DBIs) are crucial for achieving the economic diversification and digital empowerment objectives delineated in Vision 2030 (Vision 2030, 2024). Despite progress in digital incubation initiatives, their efficacy and sustainability continue to be variable. Previous studies have mostly examined structural and technological aspects, whereas cultural and human factors have received insufficient attention. Recent studies increasingly recognize these features as essential factors influencing incubator performance, information dissemination, innovation, and startup expansion. Leadership, communication, motivation, and digital skills are all important human capital qualities that digital business incubators need to be successful. Good leadership in digital settings helps teams adapt, collaborate, and continue learning, which is essential for effectively using new technology. On the other hand, digital incubation is not as effective when there is not enough training, not enough managerial experience, or poor coordination. Cultural traits including not wanting to take risks, having a hierarchy, and wanting to make decisions as a group shape entrepreneurship in Saudi Arabia. These traits may make it harder for people in the incubator to try new things, take the lead, and use digital solutions. For startups to grow, it's important for companies to encourage openness, trust, and support for new ideas. To make digital business incubators more effective and reach the goals of Vision 2030 connected to human capital and innovation, we need to look at how cultural and human aspects interact. Code Lab, a top digital incubation program at Saudi universities, is an example of how important these aspects are. Despite assisting over 17,000 participants, founding more than 400 enterprises, and generating over 1,200 employment, studies indicate persistent issues concerning cultural readiness, leadership, and interpersonal skills. This study investigates the impact of cultural and human factors on the efficacy of digital business incubators within Saudi institutions. The study utilizes a qualitative, exploratory framework, implementing semi-structured interviews with incubator directors and managers from several universities, succeeded by a thematic analysis to discern principal drivers and obstacles. This paradigm provides a sophisticated comprehension of the interconnections between culture, leadership, and human dynamics in digital incubation. The results give governments and colleges and universities useful information that can help them improve the success and long-term viability of digital incubation programs in line with Vision 2030.2. Literature Review

2.1 Conceptual Foundations

The rapid growth of digital transformation has changed how businesses work in every part of the economy. Digital entrepreneurship pertains to the establishment of enterprises and commercial frameworks that predominantly depend on digital technology, data, and connection (Elia et al., 2020; Kraus et al., 2022). It signifies an innovative paradigm of value generation defined by scalability, platform-centric ecosystems, and minimal entry barriers (Bounfour, 2016). According to Saudi Arabia's Vision 2030, digital entrepreneurship is seen as a way to diversify the economy and make the country more competitive (Vision 2030, 2024). The Vision says that innovation, using new technologies, and giving young people more authority are all important parts of moving to a knowledge-based economy. As a result, universities and innovation centers have become very important in making entrepreneurial change happen (Al-Kahtani & Alamri, 2022).

.2.2 Digital Business Incubators in Saudi Universities

Business incubators are organized spaces that help new businesses by providing mentorship, training, funding, and professional networking (Malkawi et al., 2024). The move toward Digital Business Incubators (DBIs) represents a significant shift from traditional incubation models to digitally integrated platforms that promote collaboration and innovation.

The Code Lab project at King Khalid University is an example of a digital business incubator (DBI) in Saudi Arabia that is part of the Vision 2030 goal to create a strong entrepreneurial ecosystem (Al-Fheed, 2025). These incubators give entrepreneurs access to cloud computing, AI tools, and digital marketing analytics that speed up the growth of their businesses. Empirical studies validate that digital incubation enhances startup viability, innovation potential, and job creation (Malkawi et al., 2024).

University-based incubators have become important all over the world for connecting research with business. Nonetheless, numerous analyses predominantly emphasize financial and technological aspects, frequently neglecting soft factors—particularly human and cultural influences—that dictate the sustainability of digital incubation models (Hund et al., 2021).

2.3 Human Factors Influencing Incubator Success

The human aspect includes leadership, motivation, skills, and teamwork, all of which significantly impact how well an organization works. Human Capital Theory posits that the aggregate knowledge and skills of individuals represent a significant source of innovation and competitive advantage (Mihardjo et al., 2019). This process relies heavily on good leadership. According to Kuratko et al. (2021), leaders in digital incubators are change agents who build trust, promote creativity, and help startups deal with uncertainty. Studies on digital leadership underscore qualities like adaptability, empowerment, and communication as crucial for managing technological disruptions (Meier et al., 2017; Temelkova, 2018). On the other hand, poor leadership skills and not enough training opportunities can make an incubator less efficient (Doye, 2020). Also, motivation and teamwork are important for effective knowledge sharing and innovation. Research indicates that recognition, autonomy, and collaborative

settings improve engagement and productivity in entrepreneurial ecosystems (Malkawi et al., 2024). In the Saudi context, Al-Fheed (2025) pinpointed inadequacies in human-resource preparedness and digital-skills enhancement as significant obstacles for university incubators. These results show how important it is to develop leaders, build capacity, and keep learning in order to get long-term results from incubation..

2.4 Cultural Factors and Entrepreneurial Performance

Culture is the set of beliefs, values, and rules that people in a society or organization share, shaping their behavior. Hofstede's (2011) model delineates six factors, including individualism vs collectivism, power distance, and uncertainty avoidance, that elucidate the disparities in innovation and entrepreneurial activity throughout nations. Cultural traits including collectivism, fear of danger, and respect for hierarchy affect how people start businesses in Saudi Arabia (Kamutuezu et al., 2021). Collectivism promotes teamwork and group commitment, whereas a high aversion to uncertainty may inhibit risk-taking and experimentation. This dualism changes how entrepreneurs and incubator managers see success and failure. Culture at the corporate level affects how well incubators encourage learning, collaboration, and innovation. A culture that supports innovation and encourages open communication and sharing of information improves performance and helps startups stay in business (Tanniru, 2018). But strict hierarchies and a lack of tolerance for mistakes can make it harder to adapt to digital technology (Hund et al., 2021).

Research in the Arab area underscores that cultural transition towards digital openness is essential for entrepreneurial growth (Al-Nsour & Khliefat, 2020). However, there is still not much empirical research that shows how national and organizational cultures work together in Saudi DBIs to effect outcomes. To make culturally relevant incubation techniques that fit with Vision 2030's innovation goal, we need to fill this gap..

2.5 Interrelationship between Human and Cultural Dimensions

While human and cultural elements are frequently analyzed separately, recent work indicates they function interdependently. Cultural norms affect how people lead, how they talk to each other, and how they motivate each other (Kuratko et al., 2021). In collectivist settings, participatory leadership and collaborative decision-making foster trust and involvement, whereas in hierarchical societies, directive leadership may facilitate coordination but stifle creativity (Hofstede, 2011). Digital incubators that work well bring together people's skills and the cultural background, which leads to both new ideas and social cohesiveness (Mihardjo et al., 2019; Hund et al., 2021). For Saudi incubators, this entails developing leadership styles that respect social norms while encouraging innovation, teamwork, and flexibility. This interaction is very important for sustainability. When cultural openness works with good leadership and motivated teams, incubators not only create new businesses, but they also spread entrepreneurial thinking throughout organizations. This helps to diversify the economy over the long term, as outlined in Vision 2030

III. Research Methodology

3.1 Research Design

This research used a qualitative, exploratory design to investigate the interaction between human and cultural elements influencing the efficacy of digital business incubators (DBIs) in Saudi universities.A qualitative method facilitates a comprehensive knowledge of participants' experiences, perspectives, and contextual interpretations that quantitative surveys alone fail to capture (Creswell & Poth, 2018). The exploratory design is especially appropriate due to the scarcity of empirical knowledge about soft dimensions—culture and human capital—within Saudi DBIs (Al-Fheed, 2025).

3.2 Research Approach

The inquiry employs an inductive methodology, developing conceptual knowledge from facts instead of evaluating established models.Interviews and document analysis reveal themes related to leadership methods, teamwork, motivation, and cultural orientation inside incubators.This method is in line with grounded-theory logic, which makes it possible to come up with new theoretical ideas that are useful for the Vision 2030 innovation ecosystem.

3.3 Population and Sampling

The study population consists of managers, supervisors, mentors, and administrative personnel employed in university-affiliated digital business incubators throughout Saudi Arabia. A purposive sampling method was utilized to guarantee the participation of individuals with direct operational and managerial experience. The sample consisted of

Table 1: Participant Sampling Framework

Participant Role	Number	Selection Criteria
Incubator Directors / Program Managers	6	Strategic decision-makers with ≥ 3 years of incubation-management experience
Mentors / Trainers	8	Provide continuous guidance and mentorship to incubated startups
Administrative Staff	6	Responsible for coordination, logistics, and communications
Entrepreneurs / Founders (Pilot Interviews)	4	Currently incubated or recently graduated from digital business incubators
Total Participants	24	Ensuring representation across universities and regions (Asir, Riyadh, Eastern Province)

3.4 Data Collection Methods

1- Semi-Structured Interviews

- Conducted in Arabic and English (30–45 minutes each).
- Key themes: leadership behaviors, motivation, teamwork, communication, cultural perceptions, and operational barriers.
- Interviews were recorded and transcribed verbatim with participants' consent.

2- Document Review

- Institutional reports, Vision 2030 progress documents, and incubator annual reviews were analyzed to triangulate findings (Ministry of Economy and Planning, 2023; Vision 2030, 2024). This multi-source strategy increased data credibility and reduced researcher bias.

3.5 Data Analysis Technique

The data were analyzed through Thematic Analysis using the six-step framework by Braun and Clarke (2006):

1- Familiarization with data.
2- Initial coding.
3- Theme identification.
4- Theme review.
5- Theme definition and naming.
6- Reporting and interpretation.

Coding was conducted manually and verified using NVivo 14 software to ensure transparency and traceability. Emergent themes were grouped under two main categories: human factors (leadership, motivation, teamwork, communication) and cultural factors (values, risk orientation, openness, organizational culture).

3.6 Trustworthiness and Validity

To ensure methodological rigor, the study followed Lincoln and Guba's (1985) four criteria of trustworthiness:

Table 2: Trustworthiness and Rigor of the Study

Criterion	Strategy Applied
Credibility	Member-checking with participants to confirm interpretation accuracy.
Transferability	Detailed contextual description enabling application to similar incubator settings.
Dependability	Audit trail documenting coding decisions and analysis steps.
Confirmability	Use of reflective journaling to minimize researcher bias.

Lastly, this qualitative, exploratory methodology allows for a nuanced comprehension of the impact of human and cultural dynamics on the performance and sustainability of Saudi

university-based DBIs.The design is in line with Vision 2030's emphasis on growth based on knowledge, and it lays the groundwork for creating frameworks that are specific to each situation and include leadership, motivation, and cultural readiness as key factors in the success of incubation.

IV. Findings and Discussion

4.1 Overview

This research elucidates that a complex interaction of human and cultural elements influences the efficacy of Digital Business Incubators (DBIs) in Saudi universities. Based on twenty-four semi-structured interviews with directors, mentors, coordinators, administrative staff, and entrepreneurs, the analysis reveals that neither technological capacity nor finance alone dictates success. The viability of DBIs relies on what might be referred to as soft infrastructure—the human capital that propels them and the cultural milieu that validates their methods. Two significant areas came up. The first, human factors, includes aspects such as how leaders act, how they motivate people, how they work together, and how they communicate. The second cultural factor is the beliefs, norms, and attitudes of a group, organization, or society regarding new ideas and taking risks. These areas support each other: human ability makes innovation possible, and cultural readiness decides if that innovation can grow.

This comprehension is based on assertions from the literature evaluation, where previous scholars have emphasized that successful entrepreneurial ecosystems require alignment between individuals and culture (Mihardjo et al., 2019; Hund et al., 2021). In the context of Saudi Arabia, this link gains national importance under Vision 2030, which establishes innovation and human development as essential pillars for economic transformation.

4.2 Human Factors

4.2.1 Leadership and Strategic Alignment

Participants consistently portrayed leadership as “the heartbeat of incubation.” Across roles, they described how effective leaders combine direction with empowerment, fostering an atmosphere where creativity feels safe.

“Our director empowers us to experiment and never punishes failure; this is what makes us daring with ideas.” — Manager (A1)

“He listens before deciding; that’s rare in our system.” — Mentor (B3)

“*We feel that leadership here is not about control but about enabling others to succeed.” — Coordinator (C2)*

“Some managers still think innovation means breaking rules; leadership should guide freedom, not just allow it.” — Administrator (C1)

These voices together paint a picture of a wide range of leadership styles. A1 emphasizes giving people control, B3 focuses on making decisions together, C2 highlights group success, and C1 underscores the need for organization. This pattern exemplifies directed autonomy—a leadership approach that harmonizes freedom with accountability. The results align with the assertions of Kuratko et al. (2021) and Meier et al. (2017), who contend that transformative leadership fosters creativity. This study expands these frameworks by demonstrating how Saudi incubator executives implement Vision 2030's modernization ethos: integrating hierarchical discipline with entrepreneurial openness. Leadership here becomes a way to put national reform goals into action at the corporate level.

4.2.2 Motivation and Empowerment

Across all interviews, participants associated motivation with recognition, trust, and shared purpose rather than monetary reward. Their reflections revealed a collective sense of mission.

"When my work is acknowledged in front of others, I feel more responsible to achieve the next milestone." — Staff (D4)

"We stay motivated because we know our effort helps national goals, not just internal KPIs." — Trainer (B5)

"Support from my supervisor means more than any financial bonus." — Analyst (C6)

When considered together, these points of view reveal a chain of collaboration: A5 emphasizes openness through digital tools, C3 highlights regular communication, and B6 cautions against gaps in communication. These results corroborate the Knowledge-Based View (KBV), demonstrating that open information flows transform individual knowledge into collective innovation capacity (Hund et al., 2021). So, teamwork isn't just a procedure; it's the DNA of digital incubation.

.4.2.3 Teamwork and Communication

Collaboration and transparent communication emerged as indispensable pillars of incubator success. Participants described how cross-disciplinary cooperation accelerates project outcomes.

"We use shared platforms; everyone can see project progress instantly." — IT Specialist (A5)

"When marketing and technology teams meet weekly, our startups move faster." — Program Manager (C3)

"Lack of communication is the first reason projects stall." — Administrator (B6)

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4.3 Cultural Factors

4.3.1 National Culture and Entrepreneurial Behavior

Saudi Arabia's collectivist culture both enables and constrains entrepreneurship. Participants reflected on how social expectations shape risk behavior.

"We like to succeed together but fear being blamed alone if something fails." — Entrepreneur (D2)

"Risk is still a sensitive word; families prefer stability to startups." — Founder (A6)

"Younger participants are starting to see failure as experience, not shame." — Mentor (B3)

These remarks show a culture change, from being careful (A6) to being more open (B3). They show how Vision 2030's focus on innovation is changing how people think about various aspects of life. This development corresponds with Hofstede (2011) and Kamutuezu et al. (2021) while also expanding upon their findings by illustrating a transition from risk-averse collectivism to collaborative experimentation. Saudi youth, bolstered by governmental narratives, are redefining failure as a learning opportunity rather than a source of stigma.

.4.3.2 Organizational Culture and Innovation Climate

Within incubators, organizational norms determined how ideas were evaluated and implemented.

"Here, mistakes are lessons; we talk about what went wrong and fix it together." — Mentor (B1)

"Other departments fear errors; we treat them as prototypes." — Developer (C7)

"Freedom works when there are clear goals; otherwise, people lose focus." — Administrator (C1)

These voices agree on the idea that trust and direction must go hand in hand. B1 and C7's comments indicate that a positive innovation climate thrives when experimentation is common but constrained by a clear strategy, as C1 points out. This synthesis resonates with Bounfour (2016) and Tanniru (2018) from the literature review, indicating that "disciplined freedom" fosters sustainable creativity—especially in public-sector institutions adjusting to market dynamics.

4.3.3 Cultural Readiness for Digital Entrepreneurship

Digital transformation requires more than technological adoption; it entails a psychological and cultural shift.

"Some employees still see technology as extra work, not an advantage." — Support Officer (A4)

"We had to train people to trust online collaboration; once they did, performance jumped." — Coordinator (B2)

A4's statement shows the initial resistance, and B2's comment shows how things changed after that. Together, they demonstrate how digital culture has evolved in DBIs, proving that trust and experiential learning are the driving forces behind these changes. These findings support Al-Nsour and Khliefat (2020), emphasizing that leaders who model digital behavior accelerate acceptance and productivity.

4.4 Integration of Human and Cultural Dynamics

Several participants explicitly linked human and cultural dimensions, demonstrating their interdependence.

"When leaders trust us, we become more open to change; that's how culture evolves." — Mentor (C8)

This statement summarizes a key finding of the research: empowered individuals transform culture, and inclusive cultures enhance leadership impact. This synergy substantiates the theoretical frameworks of Mihardjo et al. (2019) and Hund et al. (2021), while enhancing them by establishing culture as a co-determinant of innovation rather than merely a contextual element. The alignment of leadership empowerment (A1, B3, C2) and cultural readiness (B2, C8) facilitates sustainable performance in DBIs; conversely, misalignment results in what participants described as "innovation inertia."

4.5 Findings in Light of Vision 2030

The integrated findings resonate strongly with Vision 2030's national priorities, translating macro-level aspirations into micro-level organizational practice

Table 3: Alignment of Study Findings with Vision 2030 National Pillars

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Vision 2030 Pillar	Empirical Evidence	Strategic Implication
Human Capability Development	Leadership quality and staff skills emerged as decisive success factors.	Introduce national training and mentoring-certification programs for incubator leaders.
Innovation and Digital Economy	Cultural openness and trust enhance experimentation and digital adoption.	Institutionalize periodic "innovation-culture audits" across university incubators.
Economic Diversification	The alignment of human and cultural factors yields market-ready ventures.	Expand university–industry partnerships in collaboration with Monsha'at.

Hence, Vision 2030's macro-objectives materialize only when micro-level cultural transformation and human empowerment intersect within universities and their entrepreneurial units.

4.6 Theoretical Contribution

Soft-Infrastructure Integration: This research amalgamates human-capital and cultural frameworks, positing that the efficacy of DBI is contingent upon the systemic interplay between individual competencies and collective belief systems Leadership Contextualization: It broadens transformational leadership theory by incorporating the concept of guided autonomy—a culturally rooted leadership methodology that harmonizes empowerment with responsibility. Cultural Transition Model: The findings empirically illustrate how Vision 2030 expedites a societal transformation from risk-averse collectivism to collaborative digital entrepreneurship.

Finally, the success of Saudi digital business incubators comes from how well people can be both excellent and flexible in their culture. Leadership fosters trust (A1, B3, C2, C1); motivation maintains engagement (B5, C6, D4); teamwork enhances learning (A5, B6, C3); and culture validates innovation (A6, B3, C7). These dynamics, when combined, capture the spirit of Vision 2030 by turning policy talk into real-life behavior in organizations. As a result of this synergy, Saudi DBIs become places where change happens, creating a generation of entrepreneurs who are both digitally savvy and culturally confident, and who can lead the Kingdom's economy into a sustainable future..

V. Conclusion

5.1 Restating the Purpose and Context

This study aimed to investigate the influence of human and cultural factors on the performance and sustainability of Digital Business Incubators (DBIs) in Saudi universities, situated within the overarching transformation framework of Vision 2030. Previous research has predominantly concentrated on financial resources or infrastructure; however, this study embraced a more nuanced viewpoint, positing that innovation is contingent upon both individuals and the cultural milieu that empowers them. University-based DBIs were analyzed as microcosms of national transformation, wherein leadership, motivation, teamwork, and organizational culture embody the evolving identity of the Saudi innovation ecosystem.

5.2 Summary of Key Findings

The analysis revealed that DBIs thrive when human and cultural dimensions operate synergistically.

- Human factors, particularly transformational leadership, mission-based motivation, and collaborative communication, constitute the operational core of successful incubation.
- Cultural factors, including collective values, openness to risk, and digital readiness, define the institutional climate that legitimizes innovation.
- The interaction between these dimensions—what this research terms soft infrastructure—emerges as the decisive force behind incubator sustainability.
- The results collectively indicate that the evolution of Saudi DBIs mirrors the country’s wider socio-economic transformation: from hierarchical control toward guided autonomy and from risk aversion toward collaborative experimentation.

5.3 Theoretical Contributions

This study advances entrepreneurial and organizational theory through several conceptual contributions:

- Guided Autonomy: A culturally embedded leadership model that reconciles empowerment with accountability, extending transformational-leadership theory within hierarchical public institutions.
- Mission-Based Motivation: A construct linking intrinsic motivation with national purpose, reflecting how Vision 2030's collective ambition reinforces individual commitment.
- Soft-Infrastructure Framework: An integrated model combining human-capital and cultural perspectives to explain DBI effectiveness, bridging Western innovation theory with Saudi organizational reality.

By contextualizing global theories within a rapidly modernizing national framework, the study contributes to the growing scholarship on culturally grounded innovation ecosystem.

5.4 Practical and Policy Implications

The findings provide actionable insights for multiple stakeholders:

Universities should embed leadership-development and cultural-audit programs within their entrepreneurship centers to foster open communication, trust, and collaborative decision-making.

Policy institutions such as Monsha'at and the Ministry of Education could establish standardized training and certification pathways for incubator managers and mentors, ensuring leadership consistency across universities.

Entrepreneurs and incubated startups are encouraged to cultivate digital collaboration, embrace learning from failure, and view experimentation as a collective, rather than individual, pursuit.

Together, these measures can transform university incubators into national laboratories of innovation—spaces where Vision 2030's objectives are realized in practice.

5.5 Alignment with Vision 2030

The findings align closely with three core pillars of Vision 2030:

Table 4: Integration of Study Insights with Vision 2030 Strategic Outcomes

Vision 2030 Pillar	Study Insights	Strategic Outcome
Human Capability Development	Leadership, skills, and motivation as key incubator enablers.	Establish national mentoring and leadership-accreditation frameworks.
Innovation and Digital Economy	Cultural openness and digital trust drive experimentation.	Integrate "innovation-culture assessments" into higher education policies.
Economic Diversification	Human–culture synergy creates sustainable, market-ready startups.	Strengthen partnerships between universities, investors, and industry.

Through this alignment, Vision 2030's macro-level ambitions translate into the daily micro-practices of university innovation systems—turning strategy into lived institutional behavior.

5.6 Limitations of the Study

While the study provides rich qualitative insights, several limitations warrant acknowledgment. The focus on university-based incubators may not fully represent private-sector or regional accelerators. The qualitative design, though offering depth, limits generalizability; future quantitative testing is needed to validate the emergent constructs. Additionally, cultural hierarchy within Saudi institutions may have influenced participant responses, warranting cautious interpretation of leadership perceptions.

5.7 Directions for Future Research

Building on these insights, future research could pursue several directions:

- Conduct quantitative studies to test the relationships among leadership, motivation, and innovation outcomes identified here.
- Undertake comparative analyses between Saudi incubators and those in other Vision-oriented economies (e.g., UAE, Qatar, Singapore) to examine the cultural transferability of the guided autonomy model.
- Implement longitudinal research to capture cultural change and innovation behavior over time.
- Explore sectoral extensions by applying the framework to non-academic innovation environments, such as government labs or private accelerators.

Such inquiries would deepen understanding of how cultural transformation interacts with leadership evolution in emerging innovation systems.

5.8 Concluding Statement

This study finds that human excellence and cultural adaptability are the two main drivers of digital entrepreneurship in Vision 2030. The success of Saudi DBIs is not due to technology alone; it results from a synergy of empowered individuals, inclusive leadership, and a culture that endorses experimentation. Saudi incubators show how the country is moving toward a more diverse, innovation-driven economy by putting the values of trust, collaboration, and shared purpose into action. In a way, DBIs are like small examples of change. They show how the goals of Vision 2030 can be put into practice every day and teach the next generation of Saudi innovators how to build businesses and the future.

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