An evaluation of the impact of AI on entrepreneurial decision-making processes in different cultures

Author: Milou Ekkel
University of Twente
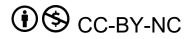P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT,

This thesis explores how entrepreneurs from different cultural backgrounds perceive the usefulness of Artificial Intelligence (AI) in their decision-making processes. The study builds on effectuation theory (Sarasvathy, 2001), which emphasizes flexible and means-driven decision-making in uncertain environments. Specifically, it investigates how three core principles of effectuation—Bird-in-Hand, Affordable Loss, and Crazy Quilt—interact with AI tools, and how national cultural values may influence this interaction. Through qualitative, exploratory research, combining pre-surveys and semi-structured interviews, data is collected from early- to mid-stage entrepreneurs across multiple countries. Using abductive reasoning and the Gioia methodology for analysis, the study contributes to a deeper understanding of how culture and decision-making logic jointly shape AI adoption. It finds that perceived usefulness of AI varies depending on both effectual logic and cultural context, offering theoretical insights and practical implications for entrepreneurs and innovation policy. In particular, it highlights how entrepreneurs and policymakers can enhance AI adoption by aligning tools and training with local cultural norms and entrepreneurial practices, thus maximizing relevance and impact in diverse contexts.

Graduation Committee members:

Dr. M.R. Stienstra
Dr. I. Skute

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1. INTRODUCTION

Entrepreneurs and new ventures play a crucial role in driving economic growth, technological innovation, and societal progress. Startups introduce new and innovative technologies, which is relevant for several social and environmental challenges. A recent study published in the World Economic Forum showed that countries who have a high success rate of start-ups also accelerate in economic growth.

However, despite their potential, new ventures face significant hurdles in sustaining growth and achieving long-term success. Limited resources and the high uncertainty play a large role in this process. Data from the National Venture Capital Association, fewer than two out of ten start-ups succeed in the long term (Sarasvathy, 2001) Understanding how entrepreneurs make decisions, in these challenging environments, will be central to my research.

One of the primary challenges entrepreneurs encounter is strategic decision-making under extreme uncertainty, particularly in a volatile, uncertain, complex, and ambiguous (VUCA) business environment. Entrepreneurs must act quickly to keep up with the pace of the industry, this is often necessary when there is only limited information and constrained resources available. Brickmann et al. (2010) emphasize that the effectiveness of planning is context-dependent and is less valuable in highly uncertain environments or stages. This is one of the reasons why researchers started to look beyond the planning school for effective ways to manage decision-making processes in entrepreneurial context.

1.1 Effectuation

Therefore, effectuation has emerged as a prominent alternative framework for the planning school. Proposed by Sarasvathy (2001), effectuation is described as a logic of decision-making where entrepreneurs start with the creation of goals and strategies from available means. This includes, who they are, what they know and whom they know. It contrasts to causal reasoning, where goals are set before selecting the means to achieve it, based on predictive logic. Instead of forecasting the future, effectual entrepreneurs focus on shaping it through their actions and interactions with stakeholders. It allows them to remain adaptive and responsive, using the means at hand to navigate rather than planning ahead.
Effectuation research contributes to the broader ensemble of theories of human actions. It offers a dynamic and context-sensitive perspective to understand how entrepreneurs make decisions in uncertain environments (Gregoire et al., 2020). However, recent research also shows that there is more acknowledgement for hybrid logics, where entrepreneurs integrate both causal and effectual reasoning depending on the situation. This dynamic approach more accurately reflects the complexities faced in the real world (Reyman et al., 2017, Dew et al., 2011)

1.2 Relevance of AI

AI has emerged as a powerful tool with the potential to enhance entrepreneurial decision-making. Through features such as advanced analytics, pattern recognition, and real-time insights, AI can support entrepreneurs in navigating uncertain and fast-changing business environments (Chalmers et al., 2020). Despite its promise, the role of AI in entrepreneurial decision-making remains underexplored. Also it's relation to the different decision-making logics and whether it favors or disrupts current approaches, is not yet researched. Entrepreneurs using causal logic may adopt AI for forecasting and optimization of risk management, mainly using it to enhance the structured planning process. Whereas effectual entrepreneurs might use it for testing of ideas and adaptive learning.

1.3 The role of culture

While AI offers new opportunities for optimizing decision-making processes, the adoption may not be universal. Recent research emphasizes the influence of culture on how AI is understood and used (Juzuf et al., 2024). Hofstede's cultural dimensions theory provides a valuable framework for understanding these differences (Hofstede, 1980). By defining different dimensions, like Individualism and Power-distance, Hofstede made it possible to assess these dimensions for various countries for different purposes. According to Juzuf et al., these different cultural dimensions do have an impact on the perceived usefulness of AI. Hayton et al., (2002) similarly argue that culture influences entrepreneurship both directly and indirectly. Directly through individual perception and indirectly through societal norms. They found four of Hofstede's dimensions have a direct impact on entrepreneurial activity. This emphasizes the importance of culture as an important factor in this research.

1.4 Research question

This study builds on the foundation of effectuation by Sarasvathy (2001) and amongst others Gregoire and Cherchem (2020), but also on recent work on AI and culture by Juzuf et al. (2024), aiming to connect these domains in a novel way. By integrating these domains, this research addresses an important gap in literature. Despite increasing interest in AI and entrepreneurship (Uriarte et al., 2025), there remains limited understanding of how cultural dimensions moderate the perceived usefulness of AI, particularly when viewed through the lens of entrepreneurial decision-making logic. The goal is to address the gap in current research by examining how entrepreneurs' effectual logics interact with AI and how this relationship is moderated by culture. Given these complexities, this study aims to investigate the following research question: **"How is the usefulness of AI in entrepreneurial decision-making processes influenced by culture?"** By addressing this question, the research will contribute to a deeper understanding of the interplay between cultural dimensions and AI adoption in entrepreneurship. Ultimately, exploring the cultural determinants of AI adoption in entrepreneurial decision-making will provide valuable insights into how technology can be used to support startups operating in uncertain environments. Given that AI is not a one-size-fits-all solution, a nuanced perspective that incorporates cultural variability is necessary to optimize the impact on the global entrepreneurial landscape.

2. LITERATURE REVIEW AND HYPOTHESIS
Entrepreneurs operate in environments of high uncertainty, therefore their decision-making strategy should adapt accordingly. The start-up journey normally goes through various stages, discovery, validation, refine, growth, maturity, and exit. During these stages, each stage is marked by different strategic priorities and different levels of uncertainty (Kumbhat et al., 2018). In the early stages, the entrepreneurs mostly deal with high uncertainty, whereas measurable risk becomes more prominent in the later stages because there is more to lose (Peixoto et al., 2014).

2.1 Entrepreneurial decision-making
Since uncertainty and the start-up stage are both influencing the decision-making process of the entrepreneur, Sarasvathy (2001)

introduced two distinct logics. One being causal reasoning, which begins from the goal towards the means to achieve that goal, and the other being effectual reasoning, this means that the entrepreneur starts with the means and shapes the goal through action and interaction. Effectuation has been placed as the key alternative to the traditional planning school (Gregoire et al., 2020), especially when forecasting is difficult or inefficient (Brickmann et al., 2010). In the early stages, when risk is immeasurable and the future is uncertain, effectual logic is more appropriate. As ventures mature, entrepreneurs are more likely to switch over to a hybrid, where causal and effectual approaches are mixed together (Dew et al., 2011, Reymen et al., 2017).

To better understand how entrepreneurs apply effectuation, there are five key principles to effectuation. Bird-in-Hand, while using this principle, entrepreneurs begin with their identity, knowledge and network. This is most relevant during the times when resources are scarce. The second one is Affordable Loss, when this principle is used, the entrepreneur calculates what they can afford to lose. This is most usefull when there is extreme uncertainty. The third is Crazy Guilt, this principle is about forming self-selected partnerships that help with creating the future and provide additional resources. This is mostly used when the venture wants to prioritize growth and expansion. The fourth is Lemonade, according to this principle the entrepreneur should leverage surprises and mistakes as opportunities rather than setbacks. And lastly; Pilot-in-the-Plane, this principle states that entrepreneurs should see the future as something they can shape, not predict (Read et al., 2016, Sarasvathy, 2001). For this research, the focus will be on Bird-in-Hand, Affordable Loss and Crazy Guilt, because of their relevance across the stages of the venture (Read et al., 2016). Understanding how these principles are applied in decision-making processes is the foundation for the exploration of the influence and usefullness of AI and the impact of culture on that relationship.

2.2 AI in entrepreneurial decision-making

Recent advancements in AI have introduced powerful tools that are increasingly available to everyone. This can help start-ups with navigating uncertainty and enhance the decision-making process. The capabilities, such as predictive analytics and data processing, are enabling the entrepreneurs to make more informed decisions (Chalmers et al., 2020, Carayannis et al., 2024). During the different stages of the start-up's development, the expectation is that the role of AI will vary. At the start, it could be used to identify market trends and explore opportunities. In the middle stages AI can be used to test assumptions and support demand forecasting for example. In the final two stages, AI could be used to help with financial modeling and strategic forecasting (Ransbotham et al., 2021). The goal of using AI will, most likely, differ depending on the entrepreneur's decision-making logic. Since causal entrepreneurs are focused on planning and strategic forecasting, they are more likely to use AI to create more certainty. In contrast, effectual entrepreneurs are more relying on experimentation, so they are more likely to use it for idea generation or adaptive learning (Sarasvathy, 2001, Chalmers et al., 2020). Despite these benefits, many startups encounter barriers to adopting AI. There can be a knowledge gap; many entrepreneurs are unfamiliar with how to select, train, and interpret AI systems effectively. This makes AI less usefull for them and therefore they are less likely to implement AI into their venture. Cultural and organizational resistance can also pose challenges, especially in environments where trust in automation is low or traditional managerial hierarchies prevail (Sharma et al., 2021; Mikalef et al., 2023). Finally, data quality and availability are recurring obstacles, as early-stage ventures may lack the volume or consistency of data needed for effective AI performance.

Bird-in-Hand emphasizes that entrepreneurial action should be grounded in existing identity, knowledge, and networks rather than imagined future opportunities. This approach to action is highly relevant when considering how entrepreneurs engage with new technologies like Artificial Intelligence (AI). Entrepreneurs guided by the Bird-in-Hand principle may evaluate the usefulness of AI based on how well it aligns with their existing skills, experiences, and connections. Since they are always looking at Who they are, What they know and who they know. For instance, if an AI tool enhances their domain knowledge or enables more effective use of their current networks, it may be perceived as highly useful. This relevance is particularly supported by research that shows entrepreneurs are more likely to adopt tools that reinforce their existing cognitive frames and resources (Alsos et al., 2020). *Proposition 1: Entrepreneurs who apply the Bird-in-Hand principle have a preference for using AI to strengthen their existing means such as prior knowledge, expertise, or networks.*

The Affordable Loss principle encourages entrepreneurs to act based on what they are willing to lose, thereby embracing a more risk-aware mindset. This is particularly relevant when adopting technologies that are often perceived as uncertain or disruptive, such as AI. Entrepreneurs following the Affordable Loss principle are likely to find AI tools useful if these tools reduce the perceived downside or allow them to experiment within a limited resource envelope. Literature shows that entrepreneurs often adopt technologies that help them manage uncertainty and reduce potential failure costs (Fisher, 2012). AI tools that enable small-scale experimentation, low-cost testing, or early failure identification may therefore be especially attractive to these entrepreneurs.
Proposition 2; Entrepreneurs who apply the Affordable Loss principle perceive AI as more useful when it helps to evaluate or minimize risk and uncertainty.

It emphasizes building a network of collaborators who commit to the venture without necessarily being predicted in advance. This relational approach to entrepreneurship aligns with the collaborative potential of AI, particularly tools that enhance communication, trust-building, or stakeholder coordination. Prior studies indicate that entrepreneurs value technologies that facilitate joint decision-making and stakeholder engagement (Reymen et al., 2015). As such, entrepreneurs who embrace the Crazy Quilt principle may be particularly responsive to AI tools that support transparency, relationship management, and mutual commitment among stakeholders. *Proposition 3: Entrepreneurs who apply the Crazy Quilt principle perceive AI as more useful when it facilitates stakeholder collaboration and interaction.*

2.3 Cultural dimensions

Culture influences how entrepreneurs perceive and adopt AI in decision-making. Hofstede's Cultural Dimensions help explain cross-national differences in technology acceptance (Hayton et al., 2002; Szalavetz, 2023; Sharma et al., 2021; Mikalef et al., 2023). This research focuses specifically on three dimensions: individualism versus collectivism, uncertainty avoidance, and power distance. These were selected due to their consistent relevance in prior studies. Both the study by Juzuf (2023) and the foundational work by Hayton et al., (2002) found significant effects of individualism versus collectivism on how AI is

perceived and on entrepreneurship. Juzuf (2023) also identified uncertainty avoidance as a critical cultural factor influencing perceived AI value and adoption, especially in relation to trust and risk tolerance. Whereas Hayton et al. (2002) highlighted power distance as a major factor affecting entrepreneurial behavior, making it a relevant focus for understanding hierarchical responses to AI in startups.

Uncertainty avoidance, as defined by Hofstede (1980), captures the extent to which cultures prefer predictability over ambiguity. In high uncertainty avoidance cultures, entrepreneurs tend to resist adopting technologies like AI due to concerns over transparency, reliability, and loss of control (Szalavetz, 2023). These entrepreneurs are more comfortable with traditional decision-making tools that offer deterministic outcomes. Supporting this view, Cannavale et al. (2025) found that AI adoption is drastically lower in countries with high uncertainty avoidance, as entrepreneurs fear the risks and unpredictability associated with AI. Their study confirms that cultural preferences for stability can act as a barrier to experimentation with emerging technologies. Therefore, uncertainty avoidance is a key dimension in understanding cross-cultural differences in AI adoption among entrepreneurs. *Proposition 4; Entrepreneurs from cultures with low uncertainty avoidance are more likely to perceive AI as useful for decision-making processes than those from high uncertainty avoidance cultures.*

The individualism–collectivism dimension is highly relevant to this study because it shapes how entrepreneurs approach decision-making and collaboration, key aspects influenced by AI. In individualistic cultures, entrepreneurs value autonomy and efficiency, which aligns with AI's ability to support independent decision-making (Sharma et al., 2021). In contrast, collectivist cultures prioritize group consensus and social cohesion, making them more cautious toward technologies like AI that may bypass these collective processes (Hayton et al., 2002; Juzuf, 2023). Cannavale et al. (2025) further show that AI adoption is higher in more individualistic countries, where digital autonomy is culturally supported. This makes individualism–collectivism a critical lens for understanding cross-cultural variation in AI's perceived usefulness among entrepreneurs. *Proposition 5; Entrepreneurs in individualistic cultures perceive AI as more beneficial for decision-making than those in collectivist cultures.*

Power distance reflects the degree to which inequality in power and authority is accepted within a society (Hofstede, 1980). In high power distance cultures, decision-making is centralized, and hierarchical authority is rarely questioned. This structure can conflict with the autonomous and democratizing nature of AI tools, which often enable bottom-up innovation and decentralized decision-making.

Hayton et al. (2002) identify power distance as a key cultural factor influencing innovation, noting that hierarchical norms may suppress openness to new technologies. Cannavale et al. (2025) further support this by showing that countries with high power distance demonstrate lower rates of AI adoption, particularly in entrepreneurial contexts. Their cross-country analysis finds that entrepreneurs in high power distance environments are more reluctant to implement AI tools that shift decision-making power downward or automate tasks traditionally controlled by top leadership. The study highlights that this reluctance comes not only from structural barriers but also from cultural norms around authority and accountability. Cannavale et al. Therefore, state power distance is one of the most persistent inhibitors of AI

integration in entrepreneurship across various national settings. *Proposition 6; Entrepreneurs in low power distance cultures are more likely to adopt AI for decision-making than those in high power distance cultures.*

3. METHODOLOGY

This study applies a qualitative, exploratory design aimed at understanding how entrepreneurs from different cultural backgrounds perceive the usefulness of Artificial Intelligence (AI) in their decision-making processes. The research draws upon effectuation theory (Sarasvathy, 2001) and national cultural dimensions (Hofstede, 1980), while incorporating recent insights into AI adoption across cultures (e.g., Juzuf et al., 2024; Hayton et al., 2002). To capture the complex interplay between these domains, the methodology integrates abductive reasoning, data triangulation, and the Gioia method for inductive theory building. This combination was chosen because the Gioia method is well-suited for developing new theoretical insights from qualitative data without being constrained by predefined categories. However, since Hofstede's cultural framework introduces established dimensions into the analysis, an abductive approach allows for a combination of empirical data and existing theory, balancing openness to emergent patterns with theoretical grounding.

3.1 Research setting

Given the limited empirical grounding on the interplay between AI, entrepreneurship, and national culture, a qualitative exploratory approach is most appropriate. Exploratory research is particularly suited to studying novel and complex phenomena that are not yet well theorized (Stebbins, 2001). This study was conducted in a cross-national context, involving entrepreneurs from eight countries and spanning diverse sectors including hospitality, software, coaching, and creative services. The entrepreneurs differ in their experience with AI, from minimal exposure to regular operational and strategic use, and are positioned at various stages of the venture lifecycle, from early to mid-stage development.

A qualitative abductive research design was adopted (Timmermans & Tavory, 2012), allowing for iterative movement between empirical observations and conceptual frameworks. The Hofstede dimensions, uncertainty avoidance, individualism vs. collectivism, and power distance, serve as sensitizing concepts for interpreting the data, while perceptions of AI usefulness and application of effectual logic remain open to inductive emergence. This approach fits well with the flexible and situational nature of entrepreneurial decision-making, making it suitable for exploring how founders from different cultural backgrounds approach the use of AI.

3.2 Sampling approach

This study utilized theoretical and purposive sampling, guided by three inclusion criteria: entrepreneurial role and involvement in strategic decision-making, cultural background based on nationality, and some degree of exposure to AI or digital tools in business processes. The aim was to capture a wide range of views on AI adoption and cultural influence, while maintaining a common entrepreneurial foundation (Palinkas et al., 2015).

In total, 15 interviews were conducted with entrepreneurs from 8 countries. The first 10 interviews were conducted directly by the researcher; 5 additional interviews were obtained from peers using the same interview guide to ensure consistency. Participants ranged from startup founders to SME directors

across early- to mid-stage ventures. To strengthen case diversity and ensure relevance, a short survey was administered prior to each interview. This survey was based on Table 2 of Chandler et al. (2011), which outlines validated items to assess the degree of effectual and causal decision-making. It enabled the categorization of participants along the causation–effectuation spectrum. To support triangulation and better contextualize the interviews, three additional questions were included to assess the chosen Hofstede's cultural dimensions, uncertainty avoidance, individualism–collectivism, and power distance. The survey helped confirm interpretations drawn from the interviews and enhanced later data triangulation (Carter et al., 2014).

3.3 Data collection

A qualitative, exploratory design guided the data collection process, reflecting the limited empirical grounding on the topic and the complex, context-dependent nature of entrepreneurial decision-making involving AI. Semi-structured interviews served as the primary data source, enabling in-depth exploration of the lived experiences, attitudes, and cultural contexts of entrepreneurs. Besides, the survey results supported the answers given during the interview. Each interview followed a semi-structured protocol based on the key domains of the study: entrepreneurial decision-making logic (effectuation principles), cultural background (aligned with Hofstede's dimensions), and perceived usefulness of AI. While core questions were prepared in advance, the format allowed for adaptive, open-ended inquiry and follow-up questions to deepen insights (Kallio et al., 2016). Topics included startup development, AI engagement, perception of opportunities and risks, and the entrepreneur's logic and cultural influences. Interviews were conducted in either Dutch or English, depending on participant preference, and were recorded and transcribed verbatim (with participant consent) to enable detailed analysis.

3.4 Data coding and analysis

Thematic analysis was conducted using the Gioia Method (Gioia et al., 2012), a qualitative approach particularly well-suited for investigating complex, socially constructed phenomena such as entrepreneurial decision-making across cultures. This method was chosen because it offers a systematic yet flexible way to generate grounded theory from rich qualitative data, while maintaining a strong connection to the language and perspectives of the participants. By emphasizing participant voice in the early stages of coding and then building toward theoretical abstraction, the Gioia Method supports the development of conceptually rigorous insights that remain rooted in empirical reality.

The analysis began with first-order open coding, in which interview data were labeled using terms and expressions that closely reflected the lived experiences and vocabulary of the interviewees. These initial codes were then grouped into second-order themes, which captured broader interpretive patterns across cases. These themes were guided by, but not limited to, established theoretical frameworks, primarily Sarasvathy's (2008) effectuation theory and Hofstede's (1980) cultural dimensions. This allowed the researcher to situate emerging insights within a relevant conceptual structure.

This process reflects the abductive logic of the study, where analysis moved back and forth between empirical observations and existing theory. Rather than testing predefined hypotheses, the aim was to refine and extend theoretical understanding by allowing novel or unexpected insights to emerge from the data that was collected during the interviews. Ultimately, the

second-order themes were clustered into aggregate dimensions that correspond to the study's four core pillars: Effectuation, Causation, AI, and Culture.

Each interview initially resulted in approximately 80–100 first-order codes, allowing for a high degree of detail and variation across cases. In line with the Gioia methodology (Gioia et al., 2012), these codes were later refined and reduced to around 30–40 distinct first-order concepts to ensure analytical clarity and manageability without losing richness. This process allowed for clearer decision on second-order themes and subsequently into aggregate dimensions, supporting the method's goal of moving from informant-centric terms to more specific interpretations in a systematic way.

Coding was carried out using ATLAS.ti, a qualitative analysis software that facilitated the consistent application of codes across cases and enhanced the transparency and traceability of the coding process. The software also allowed for the generation of structured code overviews, which was usefull for the analysis of the coding.

To validate the reliability of the coding approach, the coding was discussed amongst peer students. Besides, one interview was independently coded by the academic supervisor. The outcomes of this inter-coder trial were discussed in detail, leading to a refinement and alignment of the coding scheme before continuing with the remaining interviews. The final coding structure, illustrating what the first-order concepts became, as well as the second-order themes, and eventually aggregate dimensions, is presented in Table 1 (see Appendix 1).

4. RESULTS

This chapter presents the findings of empirical research in alignment with the six predefined hypotheses. Each subsection corresponds to one hypothesis and elaborates on whether the data supports or challenges the underlying assumption, using respondent quotes and observed patterns from the interviews. The role of culture is connected where relevant, especially for hypotheses involving national dimensions.

4.1 Results for Proposition 1: Bird-in-Hand Principle

One of the clearest patterns emerging from the data relates to how entrepreneurs integrate Artificial Intelligence (AI) when grounded in their own means, such as prior knowledge, experience, and networks. This aligns closely with the Bird-in-Hand principle from effectuation theory, which states that entrepreneurs initiate action based on what they already possess rather than on abstract future goals (Sarasvathy, 2001).

For example, R4 (USA), working in hospitality, explained that AI enabled him to simulate different service outcomes based on prior data from his network: *"It helps me make adjustments that I already knew were coming, I just see them earlier."* This illustrates how AI serves not as a generator of entirely new strategic directions, but as a tool for strengthening internal processes already familiar to the entrepreneur.

Similarly, R10 (The Netherlands) emphasized that AI became useful in his digital agency only when it aligned with the team's prior digital marketing skills and strategic intuition: *"We know our market. AI just speeds up what we already know works."*

In both cases, entrepreneurs adopt AI selectively, seeking alignment with their existing competencies and ways of thinking rather than adopting AI for their own sake.

These accounts lend strong support to Proposition 1, which stated that entrepreneurs applying the Bird-in-Hand principle would perceive AI as more useful when it strengthens existing means such as expertise, identity, or networks. Cultural context appeared to further reinforce this relationship. Entrepreneurs from more individualistic cultures, such as the Netherlands and Germany, emphasized self-direction and autonomy in their AI use, consistent with Hofstede's (1980) theory that individualistic societies favor internal decision-making. This suggests that the perceived usefulness of AI in the Bird-in-Hand context may be amplified in individualistic settings where personal initiative and self-reliance are culturally embedded.

Cultural background also appeared to influence this relationship. Entrepreneurs from more individualistic cultures, such as the Netherlands and Germany, highlighted autonomy and self-direction when explaining their AI adoption. This is consistent with Hofstede's (1980) theory that high individualism correlates with internally driven decision-making, suggesting that in such cultures, the Bird-in-Hand principle is particularly compatible with selective, personal AI use. While this trend was not universal, several respondents from more collectivist backgrounds showed hesitation toward trusting AI independently from their social environment, indicating that social consensus and group norms may temper the perceived value of AI in such contexts.

4.2 Results for Proposition 2: Affordable Loss Principle

The principle of Affordable Loss emphasizes taking calculated steps based on what entrepreneurs are willing to lose, rather than on projected returns (Sarasvathy, 2001). This logic becomes particularly important in environments where AI is still relatively novel and uncertain. Respondents from various countries acknowledged that AI tools are useful when they enable experimentation at low cost or help avoid large irreversible investments.

R3 (Curaçao) shared: *"I use AI to explore ideas without spending too much time or money. If it doesn't work, I've lost nothing."*

R10 (The Netherlands) also emphasized that the use of AI helped reduce upfront investments in strategy testing: *"Before, we needed consultants or a marketing test. Now I run three AI scenarios in one evening."*

R5 (The Netherlands): *"We had no external financing for the start-up, we pulled everything out of our own pockets"* His approach of using only personal funds reflects the Affordable loss principle. He supports this strategy by using AI tools to reduce upfront costs and test ideas efficiently. For example, he uses AI to help define the business steps, create a foundation for a marketing strategy and validate ideas. This makes AI a cost-effective resource that aligns directly with his low-risk, self-financed strategy of the company.

Such accounts suggest that AI is most valued when it supports low-risk testing and quick feedback loops. This provides clear support for Proposition 2, as entrepreneurs applying the Affordable Loss principle consistently described AI as useful for reducing perceived risk and resource exposure.

4.3 Results for Proposition 3: Crazy Quilt Principle

The Crazy Quilt principle refers to co-creating new ventures through partnerships with self-selected stakeholders (Sarasvathy, 2001). Entrepreneurs following this logic often highlighted the relational and collaborative aspects of entrepreneurship, and how AI can support or hinder these.

R7 (The Netherlands) explained: *"We use AI to prepare the conversation, but the trust comes from personal interaction."*

R9 (Czech Republic) noted that AI tools helped her document and follow up on client preferences: *"It's easier to keep everyone in the loop when AI automates my notes and tasks."* Implying that AI plays a role in maintaining stakeholder communication but not necessarily in initiating or deepening it.

Across the interviews, it became clear that AI is generally not perceived as a relational agent in itself, but as a functional tool that may streamline administrative or communicative aspects of collaboration. Entrepreneurs did not describe AI as enabling trust-building or stakeholder selection, core components of the Crazy Quilt principle, but rather as enhancing efficiency once a relationship had already been established. This suggests a more limited and instrumental role for AI in the co-creation process. As such, Proposition 3 receives qualified support: AI may indeed be perceived as useful for coordination and follow-up, but not for the relational groundwork or emotional engagement, which is essential for effective entrepreneurial partnerships. This distinction emphasizes the enduring importance of human judgment and interpersonal dynamics, even in increasingly digital business environments.

4.4 Results for Proposition 4: Uncertainty Avoidance

The findings reveal a notable difference in the perception of AI across cultural contexts with varying degrees of uncertainty avoidance. Entrepreneurs from low uncertainty avoidance cultures, such as the Netherlands and the United States, showed a higher tendency to experiment with AI, particularly in early-stage decision-making.

For example, R4 (USA) emphasized that the American entrepreneurial culture encourages frequent use of emerging tools like AI, precisely because there is greater comfort with risk and less need for complete certainty: *"In the U.S., we're used to trying new tech, even if it's not perfect. AI is already part of how I run things, waiting until it's flawless would just slow me down."*

This illustrates that lower uncertainty avoidance cultures are not only more open to experimenting with AI but also more inclined to incorporate it into everyday decision-making, even in the absence of clear guarantees. The American case exemplifies how cultural tolerance for ambiguity can result in a higher baseline of AI adoption among entrepreneurs.

In contrast, respondents from higher uncertainty avoidance countries, such as the Czech Republic and Curaçao, expressed more skepticism about the reliability and transparency of AI, indicating that they preferred to wait until tools had proven value or regulation before integrating them. R1 from Curaçao

commented: *"You don't want to base important business steps on something you don't fully understand."*

These findings align with prior literature. Szalavetz (2023) emphasizes that in high uncertainty avoidance cultures, skepticism about the reliability and transparency of AI systems can inhibit adoption, especially in early-stage or critical decisions. Similarly, Cannavale et al. (2025) found that entrepreneurs in countries characterized by low uncertainty avoidance are more likely to view AI as an opportunity for innovation rather than a source of risk, particularly when they are already operating under dynamic and uncertain market conditions.

These observations clearly align with Proposition 4, suggesting that low uncertainty avoidance correlates with greater AI acceptance due to comfort with experimentation and probabilistic outcomes.

4.5 Results for Proposition 5: Individualism vs. Collectivism

Entrepreneurs from more individualistic cultures, such as Germany, the Netherlands, and the United States, described AI tools as supportive of their autonomous thinking and fast-paced decision-making.

R6 (Germany) emphasized how AI allowed him to act without needing group consensus: *"I can make strategic choices without involving too many people, AI helps speed that up."*

In contrast, respondents from more collectivist cultures, such as Curaçao or the Czech Republic, noted that decisions were often made in consultation with team members or family, and the perceived value of AI was lower when it bypassed these social processes.

R9 (Czech Republic) explained: *"It doesn't feel right to base something important only on a tool, people around me also need to be involved."*

This supports Proposition 5, indicating that entrepreneurs in individualistic cultures are more likely to perceive AI as useful because it aligns with their emphasis on independence, personal agency, and efficiency. However, the influence of individualism on general AI use appears to be moderate. Rather than dictating whether AI is used or not, it shapes the way entrepreneurs interact with it. Specifically, entrepreneurs from more collectivist cultures tend to be more cautious in relying solely on AI or their own judgment. Instead, they are more likely to seek input from their team or trusted social circles before fully trusting or acting on AI-generated insights. This suggests that the cultural value placed on collective decision-making can act as a moderating factor in AI adoption, influencing the degree of reliance rather than the mere presence of use.

4.6 Results for Proposition 6: Power Distance

Responses also varied regarding power distance. Entrepreneurs from low power distance countries (e.g., the Netherlands, Norway) expressed more openness toward AI tools that automate decisions or support bottom-up innovation.

For example, one Dutch entrepreneur explained: *"In our team, anyone is encouraged to use AI to propose improvements and to*

support daily activities. It's not something that only managers apply." (R7, Netherlands)

This illustrates a culture of distributed responsibility and trust, where AI is not only accepted but actively encouraged as a tool for enhancing initiative among all team members. AI becomes part of a broader participatory approach to problem-solving and operational innovation.

By contrast, entrepreneurs in higher power distance contexts, such as Curaçao, expressed reservations about such delegation, especially when AI was seen to partially take-over traditional roles or hierarchy.

As R1 noted: *"Important calls still have to go through leadership. AI can help, but it doesn't decide."*

While this difference generally supports Proposition 6, the findings also show that AI is rarely used in a fully autonomous way. Even in low power distance cultures, entrepreneurs emphasized that AI should support, not substitute, human judgment. This indicates that openness to AI is maybe influenced more by the way the higher powers encourage their employees to use AI, then power distance itself playing a role in the application. So the openness for AI is influenced a little by the dimension of power distance, but this doesn't define the use of AI majorly.

5. CONCLUSION

This study explores how entrepreneurs from different cultural backgrounds perceive the usefulness of Artificial Intelligence (AI) in their decision-making processes. By drawing on effectuation theory and Hofstede's cultural dimensions, this thesis addressed the research question: **"How is the usefulness of AI in entrepreneurial decision-making processes influenced by culture?"**

The findings demonstrate that entrepreneurs' evaluation of AI is influenced by their decision-making logic and the cultural values of their environment. Entrepreneurs who apply the Bird-in-Hand principle tend to adopt AI when it enhances their existing knowledge or networks, which is very often the case. While those guided by the Affordable Loss principle value AI when it minimizes risk and supports experimentation, since they are able to do more with less risks and the same resources. Those practicing the Crazy Quilt principle found AI particularly useful when it facilitated communication and collaboration among stakeholders, however this impact was small.

Additionally, cultural dimensions do influence the perceived usefulness of AI. It became very clear that entrepreneurs from low uncertainty avoidance cultures are more willing to use AI in early decision-making due to greater comfort with ambiguity. They are early adopters and sometimes even pioneering in the use of new technologies. Those from individualistic cultures perceive AI as a facilitator of autonomy, this relation was also relatively clear after analyzing all interviews. Power distance had the least important impact, even though there were high differences in levels of hierarchy in the participants' organizations, the use of AI wasn't really impacted by it.

Together, these insights do show that neither effectuation logic nor national culture alone explains entrepreneurial adoption of AI. Rather, it is their interaction that determines perceived

usefulness. This offers theoretical contributions by integrating cultural context into the study of effectuation and practical implications for tailoring AI tools to fit varying entrepreneurial logics and cultural settings.

6. IMPLICATIONS

6.1 Theoretical implications

By combining effectuation theory, Hofstede's cultural dimensions, and emerging research on AI adoption, this study adds a novel perspective to the growing literature on entrepreneurial decision-making under uncertainty. While prior research has often examined these domains separately, this study highlights their interdependence. Specifically, it shows how entrepreneurs' decision-making logics interact with cultural values to shape perceptions of AI's usefulness. Additionally, the findings extend Sarasvathy's framework by demonstrating how the principles of Bird-in-Hand, Affordable Loss, and Crazy Quilt manifest differently across cultural contexts when entrepreneurs engage with digital tools such as AI. The study also contributes to cross-cultural entrepreneurship literature by linking Hofstede's dimensions directly to new technology adoption behavior, thereby bridging decision-making frameworks with cultural value theory.

6.2 Practical implications

From a practical standpoint, the results offer clear guidance for policymakers, business support organizations, and entrepreneurs themselves. First, the findings suggest that AI training and support programs should not follow a one-size-fits-all model. Instead, efforts should be tailored to the cultural and decision-making profiles of target users. For example, in high uncertainty avoidance cultures, initiatives that emphasize reliability, transparency, and controlled experimentation may be more effective. In contrast, more individualistic environments may benefit from AI solutions that emphasize autonomy and fast iteration. For entrepreneurs, the study highlights the value of aligning AI tools with their dominant logic, whether exploratory and means-driven or predictive and goal-oriented. Entrepreneurs can use these insights to evaluate which AI tools are most appropriate for their context and how they should introduce them to their employees. Combining this knowledge the employees and the entrepreneurs are more likely to implement AI, while using it to its full potential. Finally, technology developers and innovation policymakers can use these insights to design more inclusive digital transformation strategies that consider local values, user preferences, and entrepreneurial behaviors.

7. DISCUSSION

While the analysis yielded clear thematic patterns, it also brought to light several complexities that merit further reflection. The Gioia method provided a systematic way of identifying themes and constructing aggregate dimensions, but it also revealed important nuances.

For example, a few respondents showed outcomes that differed from cultural expectations. For example, while Curaçao is generally associated with high power distance, some participants expressed relatively flat hierarchies and bottom-up decision-making. A particularly illustrative case is respondent 1, who is located in Curaçao but works in a team composed almost entirely of Dutch expatriates. As such, his answers may reflect Dutch cultural norms rather than local ones, such as stronger

individualism and lower power distance. This highlights the importance of distinguishing between national location and the actual cultural makeup of the organizational environment. Future studies should take into account the internal culture of entrepreneurial teams, especially in globally mobile or hybrid settings, to avoid false assumptions based solely on country affiliation.

One key limitation is that coding entrepreneurial perceptions into distinct theoretical categories was not always straightforward. Several coded statements, for example, could be interpreted both as effectuation (e.g., "means" through social networks) and as culturally driven (e.g., collectivism). For instance, the Bird-in-Hand and Crazy Quilt principles emphasize leveraging existing relationships, which can overlap with collectivist tendencies that prioritize group cohesion. Also, personal AI knowledge can be seen as a 'mean' from the Bird-in-Hand principle, as well as an AI enabler. The Gioia method requires exclusive categorization, which sometimes forced interpretive choices despite thematic overlap.

Besides, age and generation may influence how entrepreneurs engage with AI. Younger entrepreneurs tend to be more digitally literate and may adopt AI more readily, regardless of cultural context. Research by González-Anleo et al. (2024) suggests that digital maturity plays an important role in AI implementation, with younger business leaders more likely to experiment with new technologies due to familiarity and confidence in digital environments. This was also confirmed by the interviews conducted.

Lastly, while Hofstede's framework is valuable, national culture can be too broad to capture the full complexity of entrepreneurial behavior. Regional cultural differences may exist within countries, and factors such as urbanization or industry-specific norms can further shape entrepreneurial attitudes toward AI. For example, De Massis et al. (2015) emphasize that entrepreneurship is deeply embedded in local contexts and that regional institutions, values, and social norms can also have an influence on strategic behavior. This suggests that relying solely on national-level cultural indicators risks overlooking meaningful regional variation. Future studies may benefit from incorporating subnational or contextual cultural indicators, such as urban versus rural settings, regional innovation climates, or localized entrepreneurial ecosystems.

8. RECOMMENDATIONS

The findings suggest that effective support for AI adoption among entrepreneurs is culturally sensitive and attuned to decision-making logics. Policymakers and business development agencies should avoid one-size-fits-all approaches to AI training and instead develop context-specific programs that account for differences in risk perception, power structures, and collaboration norms. For example, in high uncertainty avoidance cultures, programs that build trust in AI through transparency and hands-on experimentation may be particularly effective. In contrast, in more individualistic settings, entrepreneurs may benefit more from AI tools that support independent strategic thinking and rapid prototyping.

Future research could deepen this study's findings by analyzing intra-organizational cultures, especially in multinational teams. As shown by respondent 1, location does not always equate to cultural orientation, teams may operate according to imported or hybrid norms that affect AI perceptions and usage. Studying

these microcultures could offer more accurate and actionable insights into how cultural values influence AI integration at the team level, offering actionable recommendations for both leadership and internal communication strategies.

Furthermore, research should explore the evolving nature of cultural and technological literacy. As AI becomes more integrated into global business ecosystems, cultural attitudes may shift, especially among younger or globally trained entrepreneurs. Longitudinal studies that track cultural adaptation in AI use over time would offer valuable contributions to both theory and practice.

Lastly, practical experimentation with AI in low-risk settings, as supported by the Affordable Loss principle, should be encouraged through partnerships that offer low-cost AI tools, coaching, and sandbox environments. This can democratize access to AI, especially in emerging economies, and allow entrepreneurs to align new technologies with their unique cultural and strategic realities.

From a practical standpoint, experimentation with AI in low-risk settings should be actively supported. Policymakers and business development agencies are encouraged to provide entrepreneurs with access to more extensive AI tools, coaching programs, and sandbox environments tailored to their cultural contexts. For example, startup incubators operating in high uncertainty avoidance cultures should emphasize transparency, safety, and reliability when introducing AI tools. In contrast, incubators in more individualistic cultures may benefit from offering tools that promote autonomy, flexibility, and rapid iteration.

Entrepreneurs themselves are encouraged to actively explore and experiment with AI technologies, even on a small scale. AI has demonstrated the potential to improve efficiency across various business functions, from automating routine administrative tasks to supporting strategic decision-making through advanced data analysis. Particularly in data-driven environments, AI can provide rapid, actionable insights that would be difficult or time-consuming to uncover manually. This capability not only enhances decision quality but also accelerates business responsiveness and adaptability. Early experimentation with AI tools allows entrepreneurs to develop familiarity and assess which applications offer the most value for their specific context. Rather than viewing AI as a complex or distant innovation, entrepreneurs should approach it as a flexible, accessible resource that can optimize both back-office operations and customer-facing processes. Embracing AI incrementally, starting with low-risk, can be a practical first step toward digital transformation and long-term competitiveness.

Finally, curriculum developers and entrepreneurship educators should update training programs to include culturally aware AI literacy. Embedding localized case studies, ethical considerations, and strategy alignment exercises into entrepreneurship education. Particularly in emerging economies, this can help prepare the next generation of founders to adopt AI effectively within their cultural and strategic realities.

9. APPENDIX

9.1 Appendix 1; Table 1;

This table outlines the coding structure used in the analysis of the interviews. It illustrates how First-Order Concepts were derived from direct quotes, how these were grouped into Second-Order Themes, and how they connect to broader Aggregate Dimensions. The quotes provide examples that explain the choices made for the First-Order Concepts. The table supports the feasibility and consistency of the coding approach. This structure demonstrates how empirical insights were systematically developed into theoretical categories.

Quote	First-Order Concept	Second-Order Theme	Aggregate Dimension
There is a mother company who is investing as much as they are willing to lose.	Mother company investments	Affordable loss	effectuation
We started with our own savings accounts.	Using own savings	Affordable loss	effectuation
My partner is CAO negotiator for our CAO.	Partner knowledge	Crazy Quilt	effectuation
We are, as reselling party, working closely with the other company.	Reliable partnership	Crazy Quilt	effectuation
I feel like experimental learning fits me the best, I just try and use the feedback.	Testing and iterating	leverage contingencies	effectuation
I tend to grab every chance there is along the way, because it is an opportunity or to show that we are very capable.	Grab every opportunity	leverage contingencies	effectuation
I studied technical business administration myself	Knowledge	means/ Bird in Hand	effectuation
Supply chain from beginning to end is something I find very interesting.	Personal interest	means/ Bird in Hand	effectuation
First, I started with some sort of compatibility check, so what does it take to create a product and service that fits the market and what do we want to offer.	Market / product fit	avoid contingencies	causation
We asked the people around us, what they thought and did a small questionnaire in our target area.	Market research	avoid contingencies	causation
Investments are made because of a certain marge or expected revenue generation.	Calculated decision-making	expected returns	causation
So I consciously chose a business model where I can recoup the startup costs within four years.	Business model based on expected earnings	expected returns	causation
we try to build something more independent, so the value proposition is sustainable.	Aim for sustainable business model	goals	causation
I hope to expand the team with one person this year.	Expanding team	goals	causation
I learned along the way that thinking about a sustainable business plan for the long-term is also very important.	Long-term thinking	planning	causation
Ofcourse we have a brand book and a long-term strategy about what the	Long-term strategy	planning	causation

company has to look like in five years.			
I expect change in about 2 to 4 years from now in the regulations,	Expected change	prediction	causation
I expect, based on trends of the previous years, that the demand for coaching will increase.	Expected demand rise	prediction	causation
We are bound to limited data from the government so to support our decisions we could only use our own data, which we are not consistently capturing for a long time so that data is also limited.	Limited data available	AI barriers	AI
Also my trust in AI is limited	Lack of trust in AI	AI barriers	AI
Curiosity helped with just starting to use it	Curiosity in AI	AI enablers	AI
Educate yourself on AI, it really helps.	AI knowledge	AI enablers	AI
Data-driven input and output are trustworthy if you have enough knowledge yourself	Data-driven output	AI in data	AI
Currently it is used by the financial team to analyse more data at a faster pace.	Use in financial data	AI in data	AI
AI is very usefull for small tasks, such as translating documents.	AI in translations	AI in operation	AI
We use it to assist our marketing activities by writing texts and newsletters for example.	AI in marketing use	AI in operation	AI
AI supports in our strategic choices by automating data flow, so we have a bigger foundation for our decisions.	AI as support tool	AI in strategy	AI
On a bigger and strategic level, it currently is not playing a role at all, I also don't know if I will ever be implementing that on that level.	No strategic implications	AI in strategy	AI
I make the decisions on my own.	Individual decision-making	individualism vs collectivism	culture
As a result of socialism, people used to fight for their place. Which made them very selfish.	Selfish attitude	individualism vs collectivism	culture
So, we have a very open team structure where everyone knows all the details about the company	Flat hierarchy	power distance	culture
The employees have the freedom to make their own decisions	High self efficacy	power distance	culture
Here on the island we are always a bit behind so we are not quick to adapt.	Not quick to adapt	risk avoidance	culture
I can't fully trust it yet, so I wont use the new things before others.	No trust in new things until proven	risk avoidance	culture

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