

ROLE OF PERSONAL VALUES IN AUTHENTIC ENTREPRENEURIAL MILLENNIAL LEADERS; A CROSS-CULTURAL STUDY

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This thesis is submitted for the degree of Doctor of Philosophy

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Abstract

This study explores the role of personal values as a foundational construct linking to authentic entrepreneurial leadership, specifically from the perspective of millennial leaders. Employing a quantitative methodology, the research utilizes three validated instruments: the Personal Values Framework (Sagiv & Schwartz, 2022), the Authentic Leadership Questionnaire (Walumbwa et al., 2008), and the ENTRELEAD scale for entrepreneurial leadership (Renko et al., 2015). These tools were selected based on their theoretical relevance and appropriateness for the study's cross-cultural context.

The research addresses notable gaps in the existing literature. Prior studies have predominantly focused on millennial student samples, limiting practical applicability due to participants limited professional experience. Moreover, no cross-cultural investigation has yet examined the interplay between personal values and authentic entrepreneurial leadership among millennial leaders in the UK and Malaysia. The entrepreneurial roles of millennials remain underexplored, and comparative insights into their personal values across these two national contexts are scarce. This study aims to bridge these gaps by providing empirical evidence within a cross-cultural framework, thereby contributing to a deeper understanding of value-driven leadership among millennial entrepreneurs.

Literature in this field provided the opportunity for establishing five research questions.

RQ1: Is there a direct relationship between personal values and authentic leadership of millennial leaders in the UK?

RQ2: Is there a direct relationship between personal values and entrepreneurial leadership of millennial leaders in the UK?

RQ3: Is there a direct relationship between personal values and authentic leadership of millennial leaders in Malaysia?

RQ4: Is there a direct relationship between personal values and entrepreneurial leadership of millennial leaders in Malaysia?

RQ5: Are there differences in personal values of authentic entrepreneurial leaders of Generation Y between the two cultures?

Guided by a positivist philosophy and a quantitative methodology, this study collected data from 136 millennial leaders and 213 followers in small and medium enterprises (SMEs) across the United Kingdom and Malaysia. The findings indicate a positive correlation between personal values and authentic leadership, while the relationship between personal values and entrepreneurial leadership was moderate. Cross-cultural analysis revealed four divergent personal values: benevolence and achievement were more prominent among UK leaders, whereas stimulation, conformity and tradition were emphasised by Malaysian leaders. Interestingly, the power value was not associated with Malaysian leaders, contrary to previous literature.

The study offers strategic implications for practice and research. For practitioners, the results highlight the need for tailored training programs that align with millennials' value-driven behaviours, enabling organisations to develop future leaders effectively. Employers can leverage these insights to provide differentiated resources that meet millennial leaders' expectations. For researchers and academics, the findings open avenues for further exploration of personal values across diverse cultural contexts and their integration with other leadership theories, contributing to the advancement of leadership studies.

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Acknowledgements

I am deeply grateful to the following for their support, patience, and the impact they have had on me as a researcher and as a person.

My family, dearest Sumi, Sash, Cam, and June for your patience during the countless days and nights filled with the constant sound of my keyboard. Your unwavering understanding, encouragement, and motivation sustained me through the late hours of this journey. You have always been, and will continue to be, the foundation of my success. My deepest love and appreciation go to you for standing by me every step of the way.

My parents, who watch over me from heaven, for instilling in me the value of education and the relentless drive to achieve beyond what I once thought possible. You have been the foundation of my belief system and personal values. To my dad, for being an authentic leadership role model from the earliest stages of my life. I can only aspire to emulate your work ethic and your remarkable sense of humour. To my mum, for your kindness, generosity, and genuine nature. I cherish every treasured moment we shared and only wish I had inherited your culinary skills. Thank you both for your unwavering guidance and for shaping me into the person I am today. I miss you deeply and forever.

My colleagues, Dr Karam Al Mandil and Dr David Elliott for your unswerving support and guidance on statistical analysis and the use of SPSS. A special thanks to Dr David Elliott for introducing me to the fundamentals of data analysis, providing sample analyses and recommending the use of Jamovi statistical software. Your assistance has been invaluable and is deeply appreciated. I would also like to extend my appreciation to my friend Dr Colin Fu for his candid feedback and to my daughter Sash, for introducing me to Andy Field's statistical textbook, *Discovering Statistics Using SPSS*. This resource proved invaluable for analysing and interpreting the collected data. It also simplified complex statistical jargon, making the concepts more accessible and easier to apply.

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My supervisors, Dr Raye Ng, and Dr Maria Mouratidou for your direction, structure, honesty, constructive feedback, friendship, and professionalism. This thesis would not have been possible without your keen attention to detail and the knowledge transfer that occurred during our meetings. I will always be grateful for your contributions that have supported my academic journey.

To God, for the strength and perseverance provided to me to remain on track and complete this research.

Om namah shivaya.

Namo amitabha.

Author's Declaration

This thesis results from my own work, carried out in the covid period with technical data gathering carried out by Centiment LLC limited to distribute and collect questionnaire responses from their audience panel and has not been offered previously for any other degree or diploma.

I declare that the word length conforms to the permitted maximum.

Vivek Chitran

Signature.....

Chapter 1: Introduction

A wide range of models and frameworks have been developed to conceptualise and analyse leadership from a global, cross-cultural perspective. Existing research indicates that leadership theories within the domain of cross-cultural management have significantly shaped the evolution of global leadership scholarship (Tsai and Qiao, 2023; Paiuc, 2021; Dimmock, 2020; Stein, Bell, and Ai Min, 2020; Fey, 2020; Howard and Irving, 2021). Parallel to this, numerous studies have sought to examine the behaviours and characteristics of the millennial generation through a cultural lens. Karuna and Prakash (2021) argue that millennials represent a highly diverse cohort, characterised by educational attainment, a strong achievement orientation, a desire for travel, and an emphasis on maintaining work–life balance. Furthermore, Chatzopoulou and de Kiewiet (2020) found that millennials exhibit a degree of scepticism toward corporate philanthropic initiatives, often seeking evidence of authenticity and altruistic intent behind such activities.

Drawing upon existing literature that links leadership to social networks, leadership processes, self-regulation, and the influence of leader self-identity on follower behaviour (Goel and Sharma, 2021; Kark, Van Dijk, and Vashdi, 2018; Jiang et al., 2021), there emerges a compelling opportunity to investigate leadership dynamics in relation to the millennial generation currently the largest demographic in the global workforce (Moreno, Navarro, and Fuentes-Lara, 2022). Millennials have been characterised as independent, risk-tolerant, and inclined to take ownership of their work, with a strong preference for task completion and efficiency (Hackel, 2018). Moreover, several studies highlight a pronounced entrepreneurial orientation among millennials (Bresman and Rao, 2017; Hindrawati, Dhewanto, and Dellyana, 2023). However, Liu et al. (2019) caution that despite entering their most productive life stage, millennials demonstrate lower levels of entrepreneurial engagement compared to previous generations. This observation is corroborated by data from the U.S. Office of Advocacy (2017), which indicates that younger business owners are more likely to operate as sole

proprietors, comprising 26% of non-employer firms and only 6% of employer firms (Garcia, 2021).

Generation Y, commonly referred to as millennials, exhibit distinct values and perspectives that vary across cultural contexts. Bresman and Rao (2017), in a comprehensive study involving 18,000 professionals and students across 19 countries, identified significant generational and regional differences in leadership and entrepreneurial aspirations. For instance, the study found that leadership ambition among Mexican millennials was reported at 76%, in contrast to 47% among their Norwegian counterparts. Entrepreneurial interest was highest in Mexico (57%) and the United Arab Emirates (56%), while Indian millennials showed comparatively lower interest at 43%. Additionally, concerns regarding personality–job fit were most pronounced among Japanese (66%) and Spanish (57%) millennials.

Contrasting findings from other studies further illustrate the diversity within Generation Y. In South Korea, millennials were found to be more affected by job insecurity stemming from the COVID-19 pandemic than Generation X (Jung, Jung, and Yoon, 2021). Meanwhile, in Indonesia, millennial leaders were observed to foster innovation and inspire employee success (Rony, 2019). These insights underscore the importance of contextualising generational traits within specific cultural and socio-economic environments when examining leadership and workplace behaviour.

The examination of leadership within Generation Y from both Asian and Western cultural perspectives represents a significant and timely area for further research. This aligns with prior calls by scholars (O’Cass and Siahtiri, 2013; Lee, Scandura, and Sharif, 2014) to investigate how individuals may behave differently from the expectations of their national culture, as well as to explore generational variations across countries (Kilber, Barclay, and Ohmer, 2014; Williams and Turnbull, 2015). The present study adopts a comparative approach, focusing on Malaysia (MY) and the United Kingdom (UK), and draws on a purposive sample of small and medium-sized enterprises (SMEs) from diverse sectors in both contexts. Selection criteria

were established to ensure alignment with the study's objectives. The primary aim is to examine the personal values of millennials within these two cultural settings and to assess whether these values exert an influence on leadership models relevant to this distinctive generational cohort.

1.1 Asian and Western Leadership Perspectives

An in-depth understanding of country-specific cultural attributes is essential for effective leadership in diverse organisational contexts. Recognizing the distinct mindsets and behavioural norms of multicultural teams is particularly critical for leaders operating in global environments (Zarghamifard, 2023). Xing et al. (2023) emphasise the importance of rebuilding trust in the post-pandemic era, not only within Asia but across international contexts. There is growing consensus within the Asia-Pacific region that employee practices developed in Western contexts are not readily transferable to Asian settings (De Cieri, Sanders, and Lin, 2022).

Leadership styles also diverge significantly between these cultural spheres. For example, authoritarian leadership is generally more accepted and tolerated in Asian cultures compared to Western norms (Takeuchi, Wang, and Farh, 2020). This divergence is often attributed to favourable perceptions of power and status inequality in many Asian societies. Li et al. (2021) further argue that in cultures with high human orientation, abusive leadership may paradoxically correlate with increased follower engagement. Zhuang et al. (2022) support this view, noting that external employees must adapt to Asian leadership styles characterised by authoritarianism, benevolence, and moral guidance.

Another notable distinction lies in the paternalistic nature of leadership in many Asian contexts, where leaders often perceive employees as family members (Koo and Park, 2018). Shi-Min (2015) adds that Chinese leadership typically reflects a top-down structure, resulting in unequal leader–follower relationships. Although previous literature has occasionally grouped Asian and Western leadership styles together (Koo and Park, 2018), such generalisations overlook critical cultural nuances. These differences present valuable opportunities for further exploration,

particularly in relation to paternalistic leadership theory, which is discussed in greater detail in the subsequent literature review section.

1.2 Culture

Current literature conceptualises culture through various lenses, including values, narratives, and experiential frameworks, as well as through interpretive toolkits or categorical systems (Giorgi, Lockwood, and Glynn, 2015). The significance of national culture cannot be overstated, as it serves as a critical reference point for understanding organisational behaviour and inter-organisational relationships (Mansaray and Jnr, 2020). This study adopts the perspective that culture represents a set of shared values within a specific group, which differentiates it from other groups (Schwartz, 2014). This conceptualisation supports the study's objective of examining two distinct national cultures.

Among the most widely applied cultural models are Hofstede's (1980) framework and Trompenaars and Hampden-Turner's (1998) model. Hofstede's (1991) seminal work, based on an analysis of approximately 116,000 questionnaires administered to IBM employees across 72 countries, identified five primary cultural dimensions: power distance (the extent of social inequality and acceptance of hierarchical authority), individualism versus collectivism (the relationship between individuals and groups), masculinity versus femininity (where masculinity emphasises ambition and material success, while femininity prioritises care and quality of life), uncertainty avoidance (the degree to which societies tolerate ambiguity and manage anxiety), and long-term versus short-term orientation (the focus on future-oriented virtues versus present or past traditions). A sixth dimension, indulgence versus restraint, was later introduced by Hofstede et al. (2010) to capture societal tendencies toward gratification versus self-control. These dimensions have been instrumental in mapping cultural differences across nations and remain foundational in cross-cultural research.

Trompenaars and Hampden-Turner (1998) conducted a cross-cultural study involving managers from the United States, Japan, Germany, France, Britain, Sweden, and the Netherlands, aiming to identify how cultural values influence

managerial responses to business challenges. Their research revealed that national culture plays a causal role in shaping managerial behaviour, particularly in how individuals from different countries approach problem-solving and decision-making. The framework developed by Hampden-Turner and Trompenaars (1993) is based on seven key dimensions of cultural value orientations:

Universalism vs Particularism – the emphasis on applying general rules versus adapting to specific circumstances.

Analysis vs Integration – the preference for breaking down problems versus synthesizing elements into a whole.

Individualism vs Communitarianism – the focus on personal autonomy versus collective responsibility.

Inner-directed vs Outer-directed – the belief in controlling the environment versus adapting to external forces.

Sequential vs Synchronic Time – viewing time as linear and structured versus flexible and overlapping.

Achieved Status vs Ascribed Status – status earned through accomplishments versus inherited through social or cultural factors.

Equality vs Hierarchy – the orientation toward egalitarianism versus acceptance of structured authority.

The study yielded two significant outcomes: first, intercultural business conflicts can often be traced to a limited set of cultural differences; second, despite these differences, there are sufficient cultural similarities to enable effective conflict resolution. These findings underscore the importance of cultural awareness in international leadership and management practices.

Another influential contribution to cross-cultural leadership research is the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project, conducted by House et al. (2004). This extensive study involved approximately 17,000 managers from 951 organisations across the globe and reinforced the premise that

cultural environments significantly shape leadership perceptions and practices. The GLOBE framework builds upon Hofstede's (1980) foundational dimensions, while incorporating additional constructs to reflect evolving cultural and organisational dynamics.

New dimensions introduced in the GLOBE study include family collectivism (Triandis, 1995), gender egalitarianism and assertiveness which replaced Hofstede's masculinity dimension, future orientation (Kluckhohn and Strodtbeck, 1961), and achievement orientation and humane orientation (McClelland, 1985). These additions allowed for a more nuanced understanding of cultural influences on leadership.

The GLOBE project also proposed six culturally endorsed leadership dimensions (Koopman et al., 1999):

1. Charismatic/Value-Based Leadership – emphasizing inspirational and visionary qualities.
2. Team-Oriented Leadership – focusing on collaboration and team building.
3. Narcissistic Leadership – characterised by self-centeredness and dominance.
4. Non-Participative Leadership – marked by limited involvement of subordinates in decision-making.
5. Humane Leadership – reflecting compassion and supportiveness.
6. Autonomous Leadership – highlighting independence and individualism.

These dimensions provide a comprehensive framework for analysing leadership across diverse cultural contexts and continue to inform contemporary global leadership studies. The following table summarises the differences between Hofstede and GLOBE.

Table 1. Hofstede and GLOBE Differences

Differences	Hofstede Model	GLOBE Model
Time period	1967 - 1973	1994 - 1997
Respondents	Managers and non-managers	Managers
Organisations surveyed	IBM and its subsidiaries	951 organisations globally
Industries	Information Technology	Financial services, food processing, telecommunications
Dimensions	Power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity, long-term orientation vs. short-term orientation, indulgence vs. restraint	Power distance, uncertainty avoidance, collectivism (including institutional collectivism and in-group collectivism), gender egalitarianism, assertiveness, future orientation, performance orientation, and humane orientation

Source: Adapted from Song and Ma (2021, p. 5)

Song and Ma (2021) have contributed to the development of Asian leadership literature by highlighting culturally rooted leadership models from the Indian context, such as the Nurturant-Task Leadership Model, the Karta Model, and the Mother Leadership Model, all of which represent variations of paternalistic leadership. These models emphasise care, responsibility, and authority, reflecting deeply embedded cultural values. Similar findings have emerged from Chinese leadership studies, where models are often characterised by authoritarianism, benevolence, and morality, traits commonly associated with paternalistic

leadership styles. These leadership attributes are shaped by philosophical and religious traditions including Confucianism, Taoism, and Buddhism (Wong, 2001).

Confucianism promotes values such as faithfulness, altruism, and respect for hierarchy; Taoism emphasises the harmonisation of body, mind, and spirit; while Buddhism advocates for wisdom and moral virtues (Yang, 2021). These philosophical foundations continue to influence leadership behaviours and expectations in many Asian societies, offering a culturally subtle lens through which leadership can be understood and practiced.

1.3 Leadership Across Countries

Early cross-national leadership studies revealed notable differences in leadership styles across countries yet often framed these variations within a simplified continuum ranging from autocratic to democratic leadership, later evolving to include employee democracy and participative leadership models (Zander, 2020). While these frameworks offered initial insights, they represent a somewhat myopic view of leadership development, primarily focusing on surface-level implications across national boundaries. Such approaches tend to overlook the complex, culturally embedded factors that shape leadership behaviours and expectations.

Nevertheless, subsequent research has expanded the theoretical landscape, contributing to a more refined understanding of leadership across diverse cultural contexts. These contributions are outlined in Table 2, which summarises key studies that have enriched the current body of literature and offer deeper insights into culturally contingent leadership models.

Table 2. Cross-cultural Leadership Studies From Early 2000 Onwards

Authors	Countries included	Leadership type measures	Cultural endorsement
House et al. (2004)	17,000 mid-level managers from three industries in 62 countries	Charismatic leadership Participative leadership Team-oriented leadership Humane-oriented leadership	House et al.'s (2004) cultural dimensions: Performance orientation, humane orientation, future orientation, assertiveness, gender egalitarianism, power distance, uncertainty avoidance, and in-group collectivism
Fu et al. (2004)	1, 764 managers from different industries in 12 countries (China, France, Hong Kong, India, Japan, Mexico, Netherlands, New Zealand, Taiwan, Thailand, Turkey, and the US)	Perceived effectiveness of managers' influence tactics on subordinates	House et al.'s (2004) cultural dimension measures of uncertainty avoidance and in-group collectivism
Glazer (2006)	15, 606 employees in 19	Supportive leadership	Schwartz's (1994) cultural

	countries (in 5 geographic and/or social regions)	Supervisor emotional support	dimension measure of “autonomous”
Banai and Reisel (2007)	1, 933 salaried clerical and administrative staff in 6 countries (Cuba, Germany, Hungary, Israel, Russia, and USA)	Supportive leadership as helping and guiding subordinates e.g. toward goal accomplishment, independent decision-making, and preparing plans to guide action	By research design as countries differ on power distance, individualism, and collectivist dimensions
Zander, Mockaitis, Harzing and 21 co-country investigators (2011)	1, 776 participants from executive MBA programs in 17 countries (Brazil, Chile, Finland, Germany, Greece, India, Japan, Lithuania, Malaysia, Mexico, Netherlands, Philippines, Portugal, Sweden, Thailand, Taiwan, and Turkey)	Scenarios on: Decision making: (7 decision alternatives from leader’s own decision to accept majority viewpoint) Rewarding high-performing employees: (7 decision alternatives, e.g. individual-based, group-based,	Linked to House et al.’s (2004) culturally endorsed leadership prototypes: Charismatic leadership, Humane-oriented leadership, Participative leadership, Self-protective leadership,

Zander, Mockaitis, Harzing and 20 co-country investigators (2020)	1, 868 participants from executive MBA programs in 22 countries (above sample plus Canada, France, Ireland, UK, and the USA)	non-monetary rewards etc.) Empathizing: (6 decision alternatives for when a subordinate has a very sick partner)	Autonomous leadership
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Source: Adapted from Zander (2020, p. 369)

Research by Fu et al. (2004) identified a clear relationship between managerial influence strategies and the cultural dimension of uncertainty avoidance, as conceptualised in House et al.'s (2004) GLOBE study. This suggests that cultural attitudes toward ambiguity and risk significantly shape how leaders engage with subordinates. Similarly, Banai and Reisel (2007) found that supportive leadership was more prevalent in countries such as Cuba, Hungary, and Russia, compared to Germany, Israel, and the United States, indicating regional variations in leadership preferences and expectations.

Glazer (2006) extended this line of inquiry by linking supportive leadership to Schwartz's (1994) autonomy dimension, which reflects an intrinsic motivation associated with positive psychological well-being (Sagiv and Schwartz, 2022). These findings underscore the importance of cultural values in shaping leadership styles and their perceived effectiveness.

Further contributions by Zander et al. (2011) emphasised that leadership approaches vary significantly across national contexts, a conclusion reinforced by later findings (Zander et al., 2020), which highlighted the central role of culture in influencing leadership behaviour. Collectively, these studies support the argument that leadership cannot be divorced from its cultural context and must be examined through a culturally sensitive lens.

Hofstede's (2011) six cultural dimensions offer a foundational framework for understanding cross-national differences in organisational behaviour and leadership. These dimensions are particularly relevant in examining how cultural values shape leadership expectations and practices:

- a) Power Distance refers to the extent to which unequal distribution of power is accepted within a society. Hofstede (1983) links this dimension to centralised authority and autocratic leadership, noting that inequality is often perceived as originating from lower ranks and is socially accepted by both leaders and followers. In high power distance cultures such as Malaysia, the Philippines, Mexico, Singapore, and South Korea, hierarchical structures are more prevalent, whereas countries like Austria, New Zealand, Norway, the United States, and Germany exhibit lower power distance and more egalitarian tendencies.
- b) Individualism vs Collectivism addresses the degree to which individuals are integrated into groups. In individualistic societies, such as those in North and South America and Western Europe, personal autonomy, freedom, and self-esteem are emphasised. In contrast, collectivist cultures prioritise group cohesion and financial security (Bobowik et al., 2011).
- c) Masculinity vs Femininity reflects the distribution of emotional roles between genders. Masculine cultures value assertiveness, competition, and achievement, while feminine cultures emphasise care, modesty, and quality of life.
- d) Uncertainty Avoidance pertains to a society's tolerance for ambiguity and uncertainty. Cultures with high uncertainty avoidance tend to implement strict codes of conduct and exhibit anxiety in unfamiliar situations, whereas low uncertainty avoidance cultures are more relaxed and open to change.
- e) Long-Term Orientation, also known as Confucian Work Dynamism, is based on values such as perseverance, thrift, respect for status-based relationships, and a sense of shame. This dimension is prominent in East Asian countries and parts of Eastern and Central Europe, reflecting the influence of Confucian teachings.

f) Indulgence vs Restraint captures the extent to which societies allow gratification of desires and enjoyment of life. Indulgent cultures encourage leisure and personal fulfilment, while restrained cultures emphasise self-discipline and control.

Hofstede's (2001) research has significantly contributed to understanding cultural values in Asian countries, highlighting characteristics such as high-context communication, collectivism, and high power distance. A cross-cultural comparative study by Casimir and Waldman (2007), examining leaders in Australia and China, found that specific leadership traits are influenced partly by cultural factors and partly by the functional requirements of leadership roles. In contrast, Hui, Au, and Fock (2004) observed that perceptions of job autonomy were positively associated with job satisfaction, independent of cultural influence; however, this relationship was stronger in contexts with low power distance compared to those with high power distance. Liden (2011) supports this view, asserting that cultural variables are essential for understanding cross-cultural variations in leadership behaviour.

One of the principal criticisms of Hofstede's research is its historical context, as the original study was conducted in the 1970s and may lack contemporary relevance (Kirkman et al., 2006). Additional concerns have been raised regarding the dataset, which was derived from a single multinational corporation, thereby limiting its representativeness of entire national cultures (Graves, 1986; Olie, 1995). Furthermore, McSweeney (2000) argues that nations are not valid units of analysis, as cultural boundaries often transcend national borders.

Despite these criticisms, Hofstede's work has been extensively cited and has significantly shaped the themes, frameworks, and debates within cross-cultural research for more than two decades (Peterson, 2003). The enduring popularity and widespread application of Hofstede's model suggest its continued acceptance as a foundational reference in the field. Accordingly, this study employs Hofstede's framework as a comparative reference point to justify the selection of the two countries under investigation, as discussed in the following paragraph.

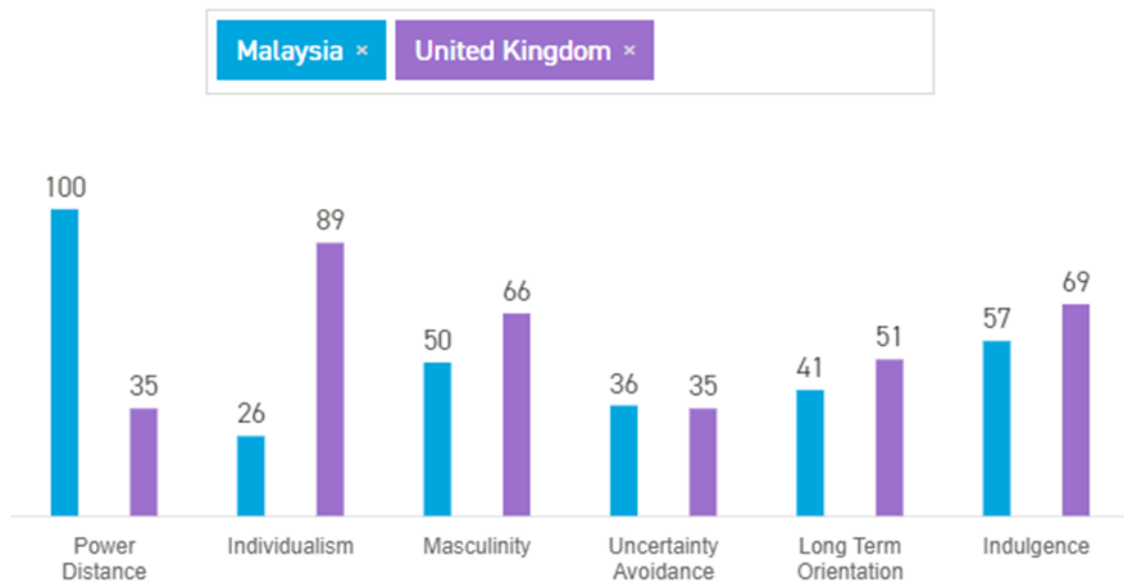
A report by the Iclif Leadership and Governance Centre (2014) identified Malaysia as having the highest Power Distance Index (PDI) globally, with a score of 100 according to Hofstede Insights (2017) (see Figure 1). This indicates that Malaysian society accepts a hierarchical order in which everyone has a defined position, requiring no further justification. Within organisational structures, subordinates are expected to follow instructions without question, and the ideal leader is perceived as autocratic (Sumaco, Imrie, and Hussain, 2014). Challenges to authority are generally not tolerated. In contrast, the United Kingdom exhibits a low PDI score of 35, consistent with other major European economies (Hofstede Insights, 2017). This reflects a cultural expectation that all individuals, regardless of position, have the right to be heard, a notion aligned with the UK's high level of individualism, as illustrated in Figure 1. Furthermore, the GLOBE study emphasised the significance of PDI as a critical dimension in cross-cultural leadership research (Fatehi, Priestley, and Taasobshirazi, 2020).

Sweetman (2012) argues that Malaysia's high Power Distance Index (PDI) can be traced to a combined legacy of the Malay feudal system and British colonial rule. Malaysian society is characterised by a rich tapestry of subcultures, including Malay, Chinese, Indian, Eurasian, and various indigenous cultures from the peninsula and North Borneo (Encyclopaedia Britannica, 2023). The Malay ethnic group, the largest in Malaysia, originates from the Malay Archipelago, which encompasses not only Malaysia but also Indonesia, Brunei, Singapore, Thailand, and the Philippines (Jerome, 2013). Blust (1986) further expands this definition, noting that the Malay cultural sphere includes groups such as the Javanese, Bugis, Sundanese, Maori, Hawaiians, and Fijians.

Malay culture has been shaped by multiple influences, including Siamese, Javanese, Sumatran, and Hindu traditions from India (Embong et al., 2016). Another profound influence is Islam, which Kling (1995, p.45) describes as "the primal cause for radical social transformation in history" among Malays. He notes that while the extent of change varied across social strata, the near-complete identification of Malays with Islam underscores its foundational role in Malay society.

Sweetman (2012) also observes that Malay culture maintains a complex system of titled classes, distinguishing elites from untitled “commoners.” This hierarchical orientation often results in the concentration of power at the top of organisations. Such cultural dynamics have implications for millennial leadership, as this generation is perceived to possess “greater access than their seniors to some of the capabilities necessary for leading complex change” (Cameron, 2016, p.4).

Figure 1. Cultural Comparison between Malaysia and the UK



Source: Hofstede Insights (2017)

A notable cultural dimension with a significant disparity between the two countries is individualism versus collectivism. The United Kingdom scores 89 on individualism, compared to Malaysia’s score of 26, which reflects a strongly collectivist orientation. Individualism concerns the relationship between individuals and the groups to which they belong. Countries such as the United States, Australia, Britain, Canada, and the Netherlands are typically individualistic, whereas collectivist societies include Pakistan, Colombia, South Korea, Singapore, and Malaysia (Hofstede, 1983). This dimension is widely regarded as one of the most influential contributions to cross-cultural research (Singelis et al., 1995; Triandis, 1990).

Individualistic societies prioritise personal autonomy over group obligations, valuing self-expression and open communication (Ng et al., 2000). Conversely, collectivist cultures emphasise interdependence, social harmony, and the maintenance of societal balance (Nishimura and Sakurai, 2017). Hofstede (2011) further notes a strong correlation between individualism and national wealth, often associated with lower power distance (see Table 3 for a summary of these distinctions).

Turning to the focus of the present study, research in the United States has identified millennials as exhibiting strong tendencies towards individualism (Anderson et al., 2017; Campione, 2015; Twenge & Kasser, 2013). This is supported by comparative research on American (individualist) and Swedish (collectivist) millennials, which revealed significant differences between these cohorts when analysed through Hofstede's cultural dimensions (Schewe et al., 2013).

Table 3. Differences between Power Distance, Individualism and Collectivism

Small Power Distance	Large Power Distance
Use of power should be legitimate and is subject to criteria of good and evil	Power is a basic fact of society antedating good or evil: its legitimacy is irrelevant
Parents treat children as equals	Parents teach children obedience
Older people are neither respected nor feared	Older people are both respected and feared
Student-centred education	Teacher-centred education
Hierarchy means inequality of roles, established for convenience	Hierarchy means existential inequality
Subordinates expect to be consulted	Subordinates expect to be told what to do
Pluralist governments based on majority vote and changed peacefully	Autocratic governments based on co-optation and changed by revolution
Corruption rare; scandals end political careers	Corruption frequent; scandals are covered up

Income distribution in society rather even	Income distribution in society very uneven
Religions stressing equality of believers	Religions with a hierarchy of priests
Individualism	Collectivism
Everyone is supposed to take care of him or herself and his or her immediate family only	People are born into extended families or clans which protect them in exchange for loyalty
“I” - consciousness	“We” – consciousness
Right of privacy	Stress on belonging
Speaking one’s mind is healthy	Harmony should always be maintained
Others classified as individuals	Others classified as in-group or out-group
Personal opinion expected: one person one vote	Opinions and votes predetermined by in-group
Transgression of norms leads to guilt feelings	Transgression or norms leads to shame feelings
Languages in which the word “I” is indispensable	Languages in which the word “I” is avoided
Purpose of education is learning how to learn	Purpose of education is learning how to do
Task prevails over relationship	Relationship prevails over task

Source: Adapted from Hofstede (2011)

Hofstede (2001) argued that power is distributed and formalised within organisational hierarchies, a phenomenon particularly evident in utilitarian companies, where inequalities of power and authority are pronounced. Employees in such structures typically perform their duties in accordance with personal values and social norms. Hofstede’s findings indicate that Malaysia’s high power distance contributes to employee frustration towards superiors, primarily due to

limited information sharing and restricted opportunities for open communication (Harun, Abdul Rahim, and Mohamad Salleh, 2020).

However, Hofstede's model has attracted debate regarding its underlying assumptions. One key point of contention concerns the use of nations as units of analysis. Scholars such as Inglehart and Baker (2000), Parker (1997), and Smith (2004) argue that nations play a critical role in shaping shared societal values through collective experiences. Conversely, others adopt a more cautious stance, contending that nations encompass diverse subcultures and cannot be treated as culturally homogeneous entities (House et al., 2004; Lenartowicz and Roth, 2001).

The influence of culture on work attitudes and behaviour is noteworthy; however, while this is an appealing area for exploration, the primary focus of this research is to examine the nuances of leadership practices among the target cohort within two distinct cultural contexts. Hofstede's model highlights additional differences between Malaysia and the United Kingdom beyond power distance and individualism, including variations in masculinity (50 vs 66), long-term orientation (41 vs 51), and indulgence (57 vs 69), as illustrated in Figure 1.

Nevertheless, the selection of the UK and Malaysia for this study is primarily based on the substantial divergence in power distance and individualism, which represent the most pronounced differences between the two countries. These dimensions are particularly significant in cross-cultural research, as they influence decision-making processes and personality traits (Ahmed, Mouratidis, and Preston, 2008). Testing all of Hofstede's dimensions and assessing their impact on leadership across both countries falls beyond the scope of this study. Consequently, culture is not treated as a mediating variable in this research.

1.4 Generation Y

The term generation is commonly defined as an age cohort sharing distinctive characteristics shaped by common formative influences, which differentiate it from preceding groups (Ogg and Bonvalet, 2006). Egri and Ralston (2004) propose that generational groups can be associated with four overarching value dimensions: openness to change (self-direction, stimulation), conservation (conformity, security, tradition), self-enhancement (achievement, hedonism, power), and self-transcendence (benevolence, universalism).

The term Millennials or Generation Y was introduced by Howe and Strauss (2000) to describe a generational cohort in the United States born between 1980 and 1999. However, there is considerable scholarly debate regarding the precise birth years defining Generation Y. For instance, Holt, Marques, and Way (2012) suggest 1977–1981, while others propose ranges such as 1981–2004 (Hill, 2004), 1982–1995 (Zimmerer and Scarborough, 2008), 1978–1990 (Tremblay, Audet, and Gasse, 2009), and 1986–2005 (Markert, 2004). Despite these discrepancies, most experts converge on a range spanning approximately 1980 to 2000 (Mhatre and Conger, 2011), which is the definition adopted for the purposes of this study.

Holt, Marques, and Way (2012) argue that Generation Y, or millennials, hold markedly different perspectives on life compared to previous generations. This divergence is attributed to several factors, including the accelerated pace of modern life, the proliferation of communication technologies, increased travel opportunities, and greater levels of parental involvement. This cohort also referred to as the Net Generation, Generation M, Echo Boomers, digital natives (Prensky, 2001), screenagers, and the Google generation (Balda & More, 2011), is characterised by traits such as high self-esteem, self-centredness, multitasking ability, and a preference for teamwork. These values contrast significantly with those of earlier generations.

Research further indicates generational differences in job satisfaction, organisational commitment, work values, and turnover intentions (Ng and Feldman, 2010). For example, Baby Boomers (born 1943–1964) are associated with

optimism, strong work ethic, and personal gratification (Andert, 2011, citing Frandsen, 2009). Generation X (born 1960–1980), by contrast, is described as “independent (yet dependent on their parents), selfish or cynical, questioning authority, resilient, adaptable, culturally progressive, technologically savvy, expecting immediate results, and committed to their team and specific leader” (Andert, 2011, p.72).

Millennials, however, exhibit distinctive workplace attitudes, including unique approaches to work, interpersonal relationships, and communication (Anantatmula and Shrivastav, 2012). They are often associated with behaviours such as multitasking, experiential learning, and accessing information on the go (Abram & Luther, 2004). Additional traits include a desire for personalisation, experimentation, instant gratification, collaboration, work–life balance, high career expectations, and an emphasis on quality of life (Sweeney, 2005). Torsello (2019) describes millennials as a “configure culture,” capable of bridging generational gaps through innovation, while Pooley (2005) notes that their management preferences can sometimes generate distrust among older cohorts.

Cross-cultural differences further shape millennial leadership expectations. In Malaysia, Generation Y tends to value leaders who are competent, hardworking, determined, and accountable (Moorthy, 2014). Conversely, UK millennials prioritise leaders who demonstrate the ability to manage complex change, articulate passion, exhibit strong interpersonal skills, and provide private encouragement (Cameron, 2016). Durvasula and Lysonski (2008, cited in Mueller, Remaud, and Chabin, 2011) reinforce the notion that generational preferences vary significantly across cultural contexts.

These cultural and generational distinctions provide a strong rationale for the present study, which seeks to explore these differences in greater depth from an authentic entrepreneurial perspective.

1.5 Entrepreneurs

Entrepreneurs are widely regarded as agents of change, individuals who challenge traditional norms and thrive on experimentation and non-conventional practices to create competitive advantage (Saebi, Foss, and Linder, 2019; Landström, 2005).

The establishment of new ventures and the strategic actions undertaken to ensure their success are central to entrepreneurial activity (Müller et al., 2023). These perspectives underpin the present study, given the alignment between entrepreneurial characteristics and those commonly associated with Generation Y, particularly among individuals who have founded their own businesses. It is therefore essential to conceptualise entrepreneurs as both venture founders and leaders, recognising that outcomes may vary across different cultural contexts.

According to the Global Entrepreneurship Monitor (GEM, 2018), 4.0% of the adult population in the United Kingdom were actively engaged in starting a business, compared to 3.9% in France and 2.7% in Germany. However, when examining early-stage entrepreneurial activity, the UK recorded a rate of 8.24 in 2018 (GEM, 2018a), whereas Malaysia reported a significantly higher rate of 21.6 in 2017 (GEM, 2018b). These disparities may reflect differences in economic opportunities and structural conditions within each country.

Entrepreneurial leadership, as defined by Thornberry (2006), requires passion, vision, focus, and the ability to inspire others. He further asserts that entrepreneurial leaders must possess a mindset and skill set that enable them to identify, develop, and capitalise on new business opportunities. Recent studies have explored this phenomenon within the millennial cohort. For example, Genoveva and Tanardi (2020) found that millennial entrepreneurs exhibit higher levels of passion and innovation compared to their non-entrepreneurial peers, while Hindrawati, Dhewanto, and Dellyana (2023) emphasise the role of entrepreneurial agility. Despite these contributions, Liu et al. (2019) highlight a notable gap in the literature concerning millennials as entrepreneurs, underscoring the relevance and originality of the current study.

1.6 Authentic Leaders

Authentic leadership is conceptualised as a form of leadership in which individuals remain “true to the self” (Avolio et al., 2004), underscoring its emphasis on self-awareness and integrity. This authenticity is demonstrated through behaviours such as acknowledging personal mistakes, being transparent and sincere with others, and acting consistently with one’s core values (Walumbwa et al., 2008). Authentic leaders are characterised by high ethical and moral standards, maintaining alignment between values and actions (Avolio et al., 2004) and resisting compromise under situational pressures (Burke and Cooper, 2006). Sarkar (2016) further argues that authentic leaders foster learning, adaptability, and participative engagement. They are also described as service-oriented, compassionate, passionate about their work, and guided by a strong moral compass (George, 2003).

Empirical evidence suggests that authentic leadership positively influences work outcomes and employee engagement (Oh, Cho, and Lim, 2018; Alvarez et al., 2019). These effects extend to improved employee retention, enhanced customer satisfaction, the creation of a trustworthy organisational climate, and the promotion of positive follower emotions, ultimately impacting decision-making and organisational performance (Muhammad Hafiz, 2022). Swain, Cao, and Gardner (2018) similarly highlight the role of authentic leaders’ internal strength in empowering followers and fostering genuine leader–follower relationships.

Millennials demonstrate a strong preference for authentic leadership (Moore, 2014). Pradipto and Chairiyati (2021), in a study of 204 millennial employees in Indonesia, found a positive relationship between authentic leadership and organisational commitment. Sengupta et al. (2023) further explored the innovative tendencies of millennials, noting that authentic leaders’ value-driven decision-making significantly influences this generation’s engagement. Collectively, these findings reinforce the relevance of authentic leadership within the context of the present study.

1.7 Values

It is essential to distinguish between traits and values in the context of leadership. Traits are defined by McCrae and Costa (2005, p.25) as “dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings and actions,” focusing primarily on personality characteristics as predictors of leadership success. In contrast, values have been described as “a broad and relatively enduring preference for some state of affairs” (Hambrick and Brandon, 1988, p.5). Values influence leaders’ behaviour both directly through adherence to principles such as egalitarianism and indirectly, by shaping perceptions of environmental stimuli (Carter and Greer, 2013).

Schwartz and Bilsky (1987, p.551) conceptualise values as: “a) concepts or beliefs, b) about desirable end states or behaviours, c) that transcend specific situations, d) guide selection or evaluation of behaviour and events, and e) are ordered by relative importance.” Ahn and Ettner (2014, citing O’Toole, 1995, p.978) define values-based leadership as the “moral foundation underlying stewardship decisions and actions of leaders.” Muduli (2011) further argues that the values held by leaders and organisations often mirror those embedded within the national culture. For example, the cultural values associated with the United States such as independence, individualism, personal responsibility, and competitiveness are reflected in its leadership practices (Sue and Sue, 2012). These values have contributed to the country’s reputation as a global economic leader, a hub of innovation, and one of the wealthiest nations in the world (Gregson, 2017). Conversely, critics suggest that these same leadership values have also fostered an overemphasis on revenue generation, accompanied by greed and unethical behaviour (Soltani, 2014).

Within the Malaysian cultural context, values commonly emphasised include respect for elders, group and religious orientation, loyalty, face-saving, and other family-centred principles instilled from an early age (Sumaco, Imrie, and Hussain, 2014). The authors note that the influence of Western culture has led to the predominance of the nuclear family system in urban areas, fostering a generation

of youth who are increasingly assertive and independent. Nevertheless, positions of authority and power in Malaysia are often occupied by older, more conservative individuals.

Millennials' value orientations exhibit both similarities and differences across cultures. Schewe et al. (2013) conducted a study involving millennial students from three countries, with sample sizes of 102 from the United States, 105 from New Zealand, and 99 from Sweden. The findings were categorised into 17 value-based groupings, comprising eight dimensions that differed and nine that were similar across respondents. Shared values included relationships, family, societal orientation, excitement, patriotism, piety, achievement, and entrepreneurial aspiration ("own boss"). Specific values such as living simply, safety and security, accomplishment, good employment, well-behaved conduct, global outlook, team spirit, control over destiny, and living for today were also common across all groups.

Significant differences emerged between Swedish and American millennials in relation to values associated with sexual activity, marriage, and prayer, which fall under the dimension of piety. The authors concluded that while millennials share certain globalised values, their orientations remain strongly influenced by national culture, as reflected in Hofstede's cultural dimensions.

Current discourse on global leadership underscores the need for executives to develop competencies that enable them to remain competitive in an increasingly complex and interconnected business environment. These competencies are grounded in values such as integrity, sound judgement, leading by example, decisiveness, trust, justice and fairness, humility, and a sense of urgency (Ahn and Ettner, 2014; Heames and Harvey, 2006). This discussion extends to leadership attributes and traits, ranging from universal characteristics to culture-specific behaviours, and their perceived effectiveness or ineffectiveness across contexts (Aktas, Gelfand, and Hanges, 2016).

Research suggests that the values of successful leaders are shaped more by generational differences than by similarities (Ahn and Ettner, 2014). However,

much of the leadership discourse remains rooted in Western paradigms, limiting its applicability across diverse cultural and economic settings (Smith et al., 1989). Bendell, Little, and Sutherland (2016) argue that Critical Leadership Studies must re-examine existing literature to avoid perpetuating the biases of mainstream thought, which often prioritises Western traditions and examples. They further contend that leadership models grounded in Western ideals such as heroism and individualism are increasingly challenged from an Asian perspective, where collective values and relational approaches are more prominent.

1.8 Country Contexts

1.8.1 Malaysia

Malaysia, located in Southeast Asia, has a population of approximately 30 million, comprising predominantly indigenous Malays (55%), followed by Chinese (24%) and Indian Malaysians (7%), with economic power largely concentrated among the ethnic Chinese community (Chuah et al., 2016). The country's historical roots trace back to the Sultanate of Malacca, established around 1400 AD, encompassing the eastern coast of Peninsular Malaysia and parts of Sumatra (Malaysia, 2016).

Malaysia experienced successive periods of colonisation, beginning with the Portuguese in 1511 (Kosman and Mokhtar, 2019), followed by the Dutch in 1641 (De Witt, 2008), and later the British, who maintained the longest colonial presence from the 19th to early 20th centuries (Rönnbäck, Broberg, and Galli, 2022). British colonisation formally commenced in 1824, interrupted briefly by the Japanese occupation from 1941 to 1945, which ended following Japan's surrender after the Hiroshima and Nagasaki bombings (MAMPU, 2021). Malaysia achieved independence on 31 August 1957, following the unification of its three major ethnic groups Malays, Chinese, and Indians to form a self-governing nation (MAMPU, 2021).

Malaysia became officially recognised as the Federation of Malaysia in 1963, comprising Peninsular Malaysia, which separates the Indian Ocean from the South

China Sea (see Figure 2), and the northern region of Borneo, excluding Brunei (Andaya and Andaya, 1982). The federation consists of eleven states: Perlis, Kedah, Penang, Perak, Selangor (which includes the Federal Territory and the capital city, Kuala Lumpur), Melaka, Johor, Negeri Sembilan, Pahang, Terengganu, and Kelantan. The city-state of Singapore, initially part of Malaysia between 1963 and 1965, subsequently became an independent sovereign state (Andaya and Andaya, 1982).

Liu et al. (2002, p.4) describe Malaysia's ethnic composition as follows:

“Ethnic Malays are the politically dominant majority in Malaysia, with Indians and the economically dominant Chinese as minority groups, whereas ethnic Chinese are politically and economically dominant in Singapore, with Malays and Indians as minorities... Social representations of history, particularly the degree of consensus across different ethnic groups concerning crucial events in creating nationhood, are offered as a potential moderator of the relationship between ethnic and national identity.”

Malaysia has received positive recognition for its economic performance. The World Bank (2023) identifies Malaysia as one of the most open economies globally, with a trade-to-GDP ratio of approximately 130% and an average growth rate of 5.4% since 2010. The World Bank further projects that Malaysia will achieve high-income economy status by 2024. However, challenges persist, including high income inequality and low productivity growth relative to neighbouring countries, despite Malaysia ranking 55th out of 157 countries in the World Bank's Human Capital Index.

Figure 2. Map of Malaysia



Source: Nations Online (2021)

Figure 2 illustrates the geographical layout of Malaysia, which comprises West (Peninsular) Malaysia and East Malaysia, sharing borders with Thailand to the north and Singapore to the south. Indonesia is a neighbouring country to West Malaysia and shares a land border with East Malaysia. The nation consists of 13 states and three federal territories (Encyclopaedia Britannica, 2023). The states located on the peninsula include Kedah, Kelantan, Terengganu, Penang, Perlis, Pahang, Perak, Selangor, Negeri Sembilan, Melaka, and Johor, while Sabah and Sarawak are situated in East Malaysia, separated from the peninsula by the South China Sea. The federal territories comprise the capital city Kuala Lumpur, the administrative capital Putrajaya, and the island of Labuan in East Malaysia.

Malaysia's labour market and demographic profile provide further context. The country recorded an unemployment rate of 4.1% in February 2022 (Department of Statistics Malaysia, 2022). The median age was projected at 30.3 years in 2020, indicating that half of the population falls below this age (see Figure 3). Small and medium-sized enterprises (SMEs) play a critical role in Malaysia's economy, contributing 38.9% to GDP, 17.9% to export revenue, and 48.4% to employment in 2019 (Othman et al., 2022).

A study conducted by Randstad, a Malaysian employer branding research organisation, surveyed 2,524 respondents in January 2022 (The Malaysian Reserve, 2022). The findings revealed that millennials prioritise flexible working conditions,

healthcare benefits, and opportunities for learning and development, and they are the demographic most likely to switch jobs.

Table 4 provides a breakdown of the key facts of Malaysia followed by the average age of the country's population depicted in Figure 3 on page 30.

Table 4. Malaysia key facts

Total Area (Sq Km)	330,411
Monetary Unit	Ringgit (RM)
Life Expectancy at birth	Male (2020) 72.6 years, Female (2020) 77.6 years
Literacy: Percentage of Population Age 15 and over literate	Male (2019) 96%, Female (2019) 94%
Gross National Income per capita (US\$)	10,580 (2020)
Population Projection 2030	37,532,000

Source: Adapted from Britannica (2023)

Malaysia operates as a federal constitutional monarchy with a parliamentary system of government, where the Prime Minister serves as head of government and is elected through democratic processes (U.S. Department of State, 2022). The King, who acts as the ceremonial head of state, serves a five-year term and is selected on a rotational basis from among the nine hereditary Malay rulers. Despite this governance structure, the country faces ongoing human rights concerns. According to the U.S. Department of State (2022):

“The Royal Malaysian Police maintains internal security and reports to the Ministry of Home Affairs. State-level Islamic religious enforcement officers have authority to enforce some criminal aspects of sharia. Civilian authorities at times did not maintain effective control over security forces. There were reports that members of the security forces committed some abuses.”

On a positive note, Malaysia has made significant strides in digital governance, with 70–90% of government services reported as fully digital in 2022, placing the country on par with regional peers (The World Bank, 2023). Economically, Malaysia demonstrated resilience in early 2023, with GDP growth in Q1 surpassing that of neighbouring countries. The labour market maintained full employment, recording an unemployment rate of 3.5% in Q1 2023 (down from 3.6% in Q4 2022). Inflation moderated to 3.6% in Q1 2023 (from 3.9% in Q4 2022), supported by government price controls and consumer subsidies. By March 2023, inflation further declined to 3.4%, significantly lower than rates in advanced and regional economies such as the UK (10.1%), the Philippines (7.6%), Singapore (5.5%), the US (5%), and Indonesia (5%) (Ministry of Finance Malaysia, 2023).

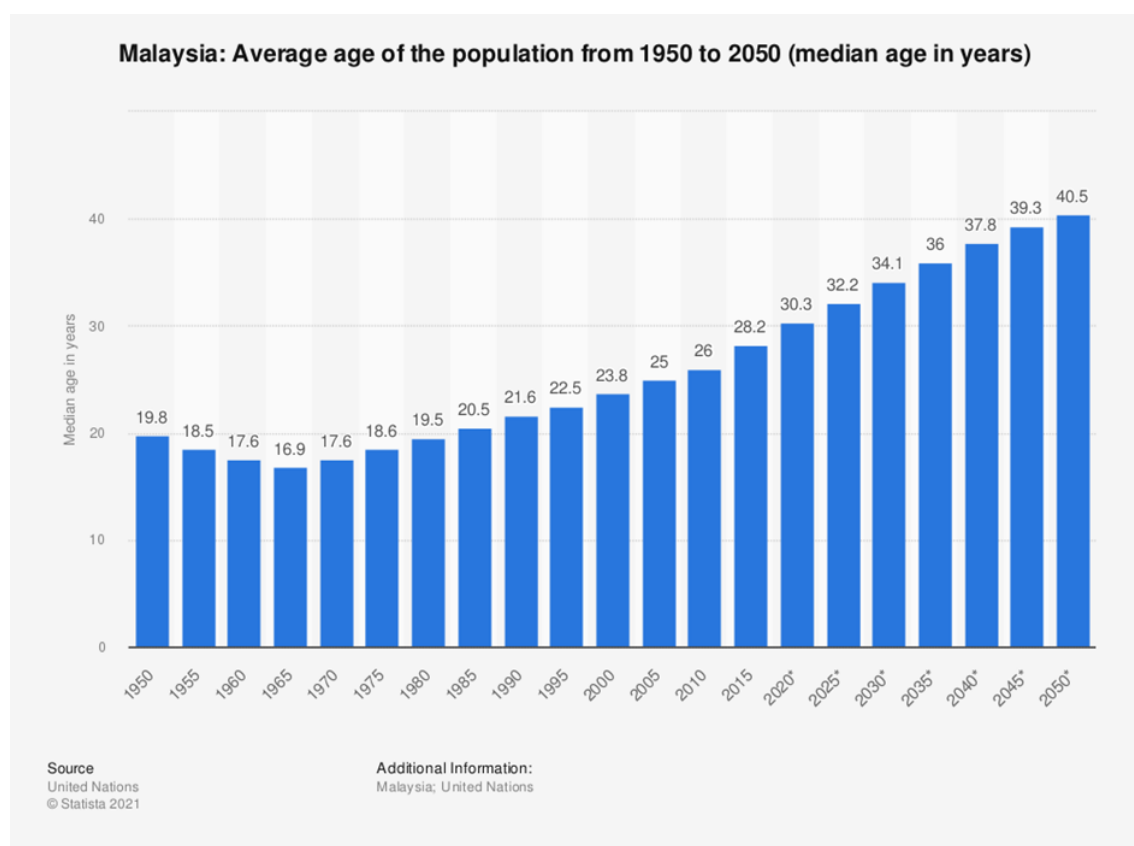
Malaysia's trade performance remains robust, with 15.5% of exports directed to China, its largest export market, helping offset weaker demand from the US and EU (Biswas, 2023). Sectoral performance in Q1 2023 was driven by strong growth in services (7.3%) and construction (7.4%), while the manufacturing sector recorded a more moderate expansion of 3.2% during the same period (Biswas, 2023).

According to the Department of Statistics Malaysia (2023), the national economy expanded by 5.6% in the first quarter of 2023, compared with 7.1% in the preceding quarter. The department further reported that this performance represents an improvement relative to the corresponding period in the previous year, when growth stood at 4.8%. This growth rate has generally exceeded that of Malaysia's neighbouring countries, except for the Philippines and certain other selected nations. Sectoral analysis indicates notable contributions from services (7.3%), manufacturing (3.2%), construction (7.4%), mining and quarrying (2.4%), and agriculture (0.9%).

Conversely, the Office for National Statistics (ONS, 2023) estimated that the United Kingdom's GDP increased by 0.1% in the first quarter of 2023, following an identical growth rate in the previous quarter. Overall, sectoral performance exhibited minimal or no growth prospects during this period. Specifically, no growth was recorded in electricity, gas, steam, and air conditioning supply, while

mining and quarrying experienced a contraction of 5.0%. Construction, however, registered a modest increase of 0.7%, marking the sixth consecutive quarter of positive growth. A report by PwC (2023) notes that the UK avoided a technical recession in 2023 and is projected to achieve an average real GDP growth of 1.0% in 2024 and 1.8% in 2025. Furthermore, the employment rate was estimated at 75.9% for the period January to March 2023, driven primarily by part-time and self-employed workers, representing a 0.2% increase compared with October to December 2022 (ONS, 2023a).

Figure 3. Age breakdown in Malaysia



Source: Statista (2021)

The data presented above indicate an increase in the average age from 30.3 years in 2020 to 32.2 years in 2025. Statista (2021b) reports that, in 2021, the Malaysian labour force aged between 25 and 29 years comprised 2.79 million individuals, representing the largest age cohort, followed by those aged 30 to 34 years. In 2020, there were 1,151,399 small and medium-sized enterprises (SMEs) employing approximately 48% of the national workforce (OECD, 2022). These figures are

particularly relevant to the present research, which focuses on millennials exhibiting characteristics associated with authentic and entrepreneurial leadership.

Moorthy (2014), in a study involving 250 Malaysian Master of Business Administration (MBA) students from the Generation Y cohort, found that most respondents endorsed behavioural leadership theory as a critical determinant of entrepreneurial success in Malaysia. This finding supports the perspective that effective leaders are developed rather than innately born. The study further suggests that Generation Y respondents acknowledged the relevance of situational leadership theory; for instance, in contexts where leaders possess greater knowledge and experience, an authoritarian leadership style was generally preferred. Such tendencies may reflect culturally specific behaviours. Similarly, Daud and Wan Hanafi (2020) observed that millennial leaders within Malaysian governmental, multinational, and public sector organisations tend to prioritise innovation, inspiration, and a visionary approach as defining leadership attributes.

Research across Asian contexts reveals divergent findings regarding millennials' leadership preferences. For example, in Thailand, millennials exhibited different responses to transformational leadership compared with Baby Boomers and Generation X (Pipitvej, 2014). In India, millennials demonstrated weaker alignment with transformational, situational, or authentic leadership models (Srivastava, 2013). Conversely, Western studies advocate transformational leadership as an effective model for millennials (Holt, Marques and Way, 2012; Onorato, Walsh and Lei, 2018), emphasising its capacity to promote change, stimulate intellectual engagement, and provide support through coaching and mentoring younger professionals. Hewitt and Ukpere (2012) further argue that Generation Y should be engaged on their own terms, recommending strategies such as creating an enjoyable work environment, modelling expected behaviours, clarifying benefits, reinforcing the significance of their contributions, offering challenging tasks, and providing customised benefits and career pathways. Additionally, Bencsik, Horvath-Csikos and Juhasz (2016) note that this cohort tends to excel in information technology and roles requiring creativity or innovation.

1.8.2 United Kingdom

The United Kingdom (UK) is an island nation comprising England, Wales, Scotland, and Northern Ireland, situated off the north-western coast of continental Europe. Its historical origins can be traced to the Anglo-Saxon era, notably under the reign of King Athelstan in the 10th century, who consolidated power through alliances with Celtic kingdoms. This process ultimately led to the union of Wales and England under the Acts of Union of 1536 and 1542, while Scotland formally joined in 1707 (Britannica, 2023a). The UK also maintains sovereignty over 14 overseas territories and several islands, including the Channel Islands and the Isle of Man, each possessing distinct legislative systems, currencies, postal services, passports, and residency regulations (New World Encyclopedia, 2022). Table 5 summarises the key historical milestones that have shaped the development of the United Kingdom.

Table 5. UK timeline

Year	Event	Economic Significance	Sources
1270–1700	Pre-industrial growth foundations	Contrary to the old “Malthusian stagnation” view, GDP per capita trends up over the long run, laying foundations for modern growth.	Broadberry (2023)
1700–1870	Industrial Revolution and sustained growth	Structural shift to industry; productivity resilience matters as Britain becomes the global income leader by mid-19th century.	Broadberry (2023)
1870–1913	Late-Victorian/Edwardian globalisation	UK leadership wanes as US/Germany catch up;	Broadberry (2023)

		services and structural change explain relative decline more than manufacturing “failure.”	
1914–1945	World wars and interwar volatility	War mobilisation, depression, and policy instability interrupt global integration and growth; long-run series capture the shocks.	Broadberry et al. (2015)
1945–1979	Post-war “mixed economy” and welfare state	Strong productivity and rising living standards under the post-war settlement; later strains pre-1970s stagflation.	Pearce and Kelly (2025)
1979–1983	Monetarist turn and rapid deindustrialisation	Tight monetary policy and structural shifts trigger an extraordinary early-1980s industrial employment fall with long-term regional scars.	Tomlinson (2021); Mustchin (2021)
1986	“Big Bang” financial deregulation	London’s securities markets are transformed; global finance expands, with benefits and later systemic risks.	Bellringer and Michie (2014)
1990–1992	ERM entry and “Black Wednesday” exit	ERM (Exchange Rate Mechanism) misalignment ends with	Söderlind (2000); Hughes Hallett

		sterling's exit; subsequent lower rates aid recovery; inflation targeting follows.	and Wren-Lewis (1997)
1997– 1998	Bank of England operational independence (MPC)	Regime shift to independent inflation targeting, credited with anchoring inflation pre-GFC despite later critiques.	Cobham (2013)
2008– 2009	Global Financial Crisis and QE	Deep recession: the BoE hits the ZLB and deploys quantitative easing, model-based evaluations find meaningful stabilisation effects.	Vo Phuong et al. (2024)
2010s	The UK “productivity puzzle”	Post-2008 productivity stalls versus pre-crisis trend; micro evidence links real wage falls and weak TFP.	Blundell, Crawford and Jin (2014); Williams et al. (2025)
2016– 2021	Brexit vote, uncertainty and trade regime change	Anticipation of lower tradables-sector productivity and higher trade costs depress investment and output relative to counterfactuals.	Broadbent et al. (2024)

2020– 2021	COVID-19 shock and furlough	GDP fall of -10.3% (2020) with unprecedented labour-market supports that limited unemployment and speeded reopening.	Sawyer (2021); Spencer et al. (2023)
2022	Energy price shock and cost-of-living crisis	Terms-of-trade shock from gas/electricity prices raises inflation and squeezes real incomes, regressive distributional effects.	Turner et al. (2022)
2024– 2025	Industrial strategy revival and welfare-state pressures	New strategy frameworks aim to lift productivity and rebalance growth; welfare reforms reflect post-austerity and post-pandemic strains.	Pearce and Kelly (2025)

During the 19th century, the British Empire encompassed approximately one-quarter of the world's landmass and exerted significant influence in shaping parliamentary democracy, as well as advancing literature and scientific progress (CIA, 2023). Furthermore, the United Kingdom has made enduring contributions to the global economy through developments in technology and industry. Among its most notable cultural exports are literature, theatre, film, television, music, and the English language (Britannica, 2023a).

Table 6. UK key facts

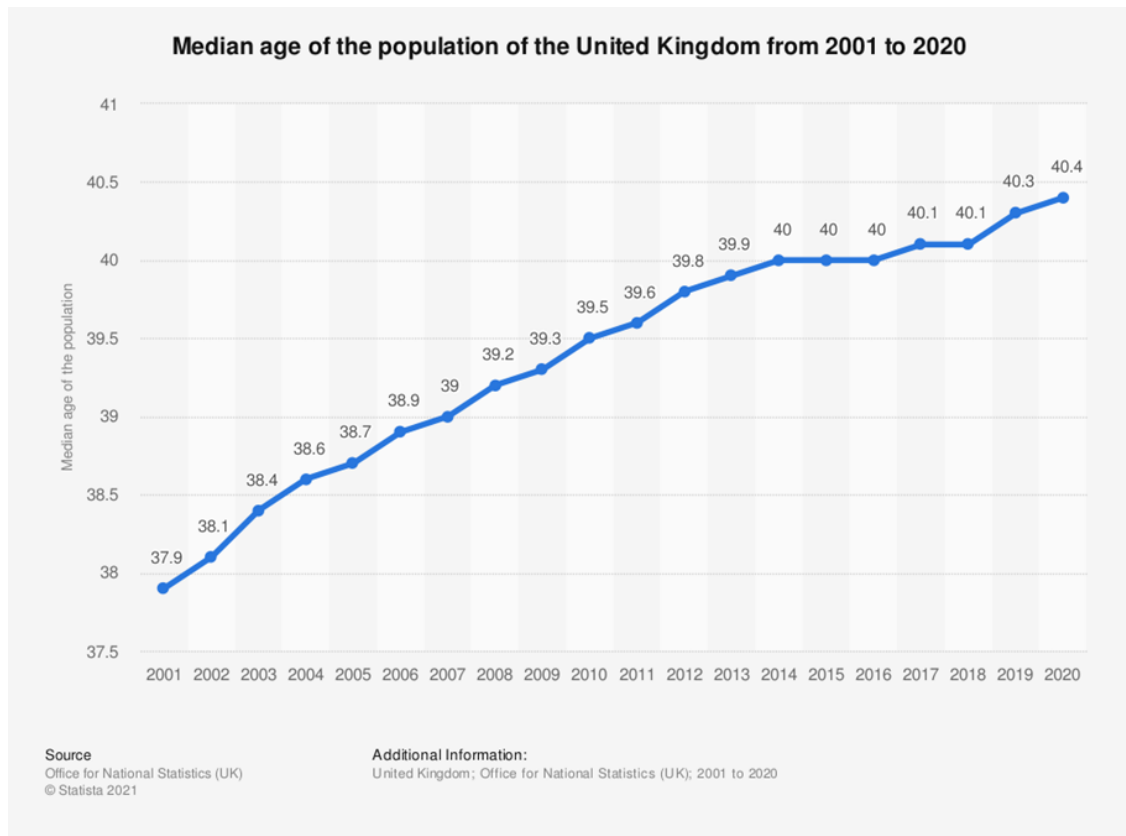
Total Area (Sq Km)	242,500
Monetary Unit	Pound Sterling (£)
Life Expectancy at birth	Male (2020) 79.6 years, Female (2020) 83.1 years
Literacy: Percentage of Population Age 15 and over literate	Male (2006) 99%, Female (2006) 99%
Gross National Income per capita (US\$)	(2021) 45,380
Population Projection 2030	70,338,000

Source: Adapted from Britannica (2023b)

The Office for National Statistics (ONS, 2022) reported that the population of the United Kingdom stood at approximately 67 million, with an unemployment rate of 3.8% for the period December 2021 to February 2022, and a median age of 40.4 years (see Figure 4). This contrasts with Malaysia's median age of 30.03 years. The demographic disparity between the two nations suggests a greater potential for engaging younger leaders in Malaysia compared to the UK. However, Lewis (2014) observes a shift within Britain's multi-generational workforce, highlighting the growing importance of leadership qualities such as helpfulness and meticulousness. This trend underscores the necessity for leaders to adopt a more empathetic and inclusive approach when managing a diverse workforce. Consequently, the reliance on personal values as a foundation for leadership practices reinforces the argument that attributes associated with humane characteristics are essential for leadership development.

An examination of key national indicators (see Tables 4 and 6) reveals that the UK is approximately 36% smaller in land area than Malaysia, yet its population density is nearly double. Furthermore, literacy rates in Malaysia are marginally lower, by 3% for males and 5% for females, compared to their UK counterparts. In terms of economic indicators, the UK's gross national income (GNI) per capita is more than four times higher than that of Malaysia.

Figure 4. Age breakdown in the UK



Source: Statista (2021a)

Statista (2022) reports that, in 2020, the United Kingdom had 14.26 million millennials, making them the largest generational cohort, surpassing Baby Boomers (14.14 million) and Generation X (13.95 million). A study of UK-based millennials suggests that they perceive themselves as offering distinctive and innovative contributions compared to their senior counterparts (Cameron, 2016). The study further highlights that millennials are natural collaborators, highly motivated, and eager to advance in their careers. They exhibit a strong appetite for professional development and a pronounced desire to identify optimal pathways to leadership. Holt, Marques and Way (2012, p.92) note that “millennials want leaders who are passionate, inventive, and entertaining and, in large, find attractive work environments to be filled with humour, silliness, and even a certain level of irreverence.”

Despite this, there is a paucity of research focusing specifically on UK millennial leaders, as most studies concentrate on the American context. From a cultural

perspective, Hofstede's Insights (2017b) indicate similarities between the UK and the United States, particularly in terms of high individualism and low power distance. This suggests that transformational leadership may be an appropriate model for UK millennials—a notable contrast to the preference for situational leadership observed among Malaysian millennials. These findings reinforce the argument that cultural context significantly influences Generation Y's leadership perspectives. This view is supported by Susaeta et al. (2013), who conclude that Generation Y cannot be regarded as a homogeneous group; rather, its characteristics must be understood in relation to national contexts. The study further asserts that generational attitudes towards work are closely linked to the economic conditions of their respective countries.

In terms of economic structure, small and medium-sized enterprises (SMEs) play a critical role in both nations. According to the OECD (2022), SMEs accounted for 97.2% of businesses in Malaysia, contributing 38.2% to GDP and employing approximately 7.3 million workers. In the UK, SMEs represent 99.9% of all businesses, employing an estimated 16.4 million individuals (Gov.uk, 2022). As of January 2021, the UK recorded 5.6 million SMEs (Hutton and Ward, 2021), compared to 1.15 million in Malaysia as of December 2020 (SME Corporation Malaysia, 2022). These figures underscore the significant economic contributions of SMEs in both countries and justify their inclusion in the present study.

1.9 Rationale for The Study

Leadership development and effectiveness remain critical areas of interest for both scholars and business practitioners. The emphasis on authentic leadership is particularly noteworthy, given its implications for ethical and moral decision-making, the facilitation of learning, a commitment to serving others, and its positive influence on employee engagement. These attributes align closely with the objectives of this study, which focuses on millennial leaders. Similarly, entrepreneurial leadership is relevant due to its applicability within small and medium-sized enterprises (SMEs), although research linking this leadership style to millennial leaders remains limited. Notably, authentic and entrepreneurial

leadership share several common characteristics. For example, authentic leaders are known to foster innovation among followers (Avolio et al., 2004; Zhou et al., 2014; Müceldili, Turan and Erdil, 2013) and demonstrate a willingness to take risks (Mumford et al., 2002).

Personal values play a pivotal role in shaping leadership behaviour and often reflect broader cultural norms. Consequently, examining the influence of personal values on millennial leaders across two distinct cultural contexts presents a compelling research opportunity. This study aims to explore the relationship between personal values and authentic entrepreneurial leadership among millennial leaders operating within SMEs in the UK and Malaysia. While prior research has examined entrepreneurial tendencies among millennials, several gaps remain. First, comparative studies between Malaysia and the UK are scarce, despite the significant cultural differences between these nations. For instance, Malaysia records one of the highest power distance scores globally (100), in stark contrast to the UK's score of 35, which is even lower than that of the United States (Harun, Abdul Rahim and Salleh, 2020; Nordin et al., 2022; Hofstede Insights, 2017). High power distance cultures are typically associated with autocratic leadership styles and centralised decision-making (Harun, Abdul Rahim and Salleh, 2020), whereas the UK's individualistic orientation contrasts with Malaysia's collectivist tendencies.

Second, most millennial-focused leadership studies use students as the primary unit of analysis rather than individuals in leadership roles. Third, there is a lack of contemporary literature addressing millennials' preferred leadership styles (Easton and Steyn, 2023). Addressing these gaps, this study offers meaningful contributions to the existing body of knowledge. Previous research has demonstrated that millennials' leadership behaviours are influenced by cultural upbringing (Schewe et al., 2013; Yadao, 2017). Furthermore, leadership legitimacy is often associated with building honest and transparent relationships with followers, a principle central to authentic leadership (Verduyn, 2019).

Finally, the integration of technology into leadership practices is particularly relevant for Generation Y, given their reputation as technologically adept digital natives (Folarin, 2021). This cohort embraces technology as a means of maintaining real-time connectivity (Holt, Marques and Way, 2012) and perceives it as a “sixth sense,” enabling seamless integration with their environment (Hershatter and Epstein, 2010).

1.10 Aim of The Study

The primary aim of this study is to examine the role of personal values in shaping the authentic leadership practices of entrepreneurial millennial leaders in the United Kingdom and Malaysia. While numerous studies have explored the relationship between this generational cohort and leadership, the majority have relied on college students as their primary respondents (e.g., Ng, Schweitzer and Lyons, 2010; Wisniewski, 2010; Au-Yong-Oliveira et al., 2018; Paukert, Guay and Kim, 2021). There is, therefore, a clear need to focus on millennials who occupy active leadership positions. This research seeks to address this empirical gap by providing insights into the leadership practices of millennial leaders within organisational contexts.

Furthermore, the emphasis on personal values and their connection to authentic and entrepreneurial leadership is significant in determining whether this cohort's leadership approaches are influenced by individual beliefs and cultural norms within their respective national settings. By investigating these dynamics, the study aims to contribute to a deeper understanding of how personal values inform leadership behaviours among millennial leaders in SMEs across two culturally distinct environments.

1.11 Research Objectives

- **RO1:** To critically evaluate whether there is a direct relationship between personal values and authentic leadership among millennial leaders in the UK and Malaysia.

- **RO2:** To critically evaluate whether there is a direct relationship between personal values and entrepreneurial leadership among millennial leaders in the UK and Malaysia.
- **RO3:** To critically analyse any differences in personal values associated with authentic and entrepreneurial leadership among Generation Y in the UK and Malaysia.

1.12 Research Questions

Creswell (2009) provides several guidelines for formulating effective research questions or hypotheses in quantitative studies:

- a) Variables are typically addressed through three approaches: comparing groups on an independent variable and assessing its impact on a dependent variable; examining relationships between one or more independent and dependent variables; or describing independent, mediating, or dependent variables.
- b) Theory testing should precede the formulation of research questions or hypotheses.
- c) Independent and dependent variables should be measured separately to maintain the cause-and-effect nature of quantitative research.
- d) Research questions and hypotheses should be included only if the hypotheses build upon the research questions.
- e) Hypotheses may be stated in null or alternative forms. The null hypothesis assumes no relationship or significant difference between variables, whereas the alternative hypothesis predicts an expected outcome.

In this study, personal values are conceptualised as the independent variable, while authentic leadership and entrepreneurial leadership serve as dependent variables. The research seeks to address the following questions:

- **RQ1:** Is there a direct relationship between personal values and authentic leadership among millennial leaders in the UK?

- **RQ2:** Is there a direct relationship between personal values and entrepreneurial leadership among millennial leaders in the UK?
- **RQ3:** Is there a direct relationship between personal values and authentic leadership among millennial leaders in Malaysia?
- **RQ4:** Is there a direct relationship between personal values and entrepreneurial leadership among millennial leaders in Malaysia?
- **RQ5:** Are there differences in the personal values associated with authentic and entrepreneurial leadership among Generation Y between the two cultures?

Relevant hypotheses (H1, H2, and H3) are presented and discussed in the literature review under subsection 2.6 Personal Values, followed by the theoretical framework in subsection 2.8.

1.13 Research Contribution

This study aims to enhance understanding of the relationship between personal values and authentic entrepreneurial leadership among practising millennial leaders. The focus on authentic leadership is significant due to its association with ethical behaviour and its conceptual links to transactional and transformational leadership, which are explored further in the literature review. Entrepreneurial leadership is equally relevant, given the study's emphasis on millennial leaders within SMEs.

The role of personal values is critical in determining how these influence leadership practices across two culturally distinct contexts. From a cultural perspective, the UK and Malaysia exhibit contrasting characteristics, particularly in terms of individualism versus collectivism and power distance. The findings of this study will provide clarity on how these cultural dimensions shape leadership behaviours.

This research addresses a notable gap in the literature, as most existing studies focus on millennials who have yet to enter the workforce rather than those in leadership positions. Establishing a positive correlation between personal values and authentic entrepreneurial leadership would have significant implications for

leadership development, particularly in understanding the personal characteristics of millennial leaders. Furthermore, identifying cultural differences in these relationships offers valuable insights for organisations managing global and multigenerational workforces.

The study also contributes to the limited empirical research on authentic entrepreneurial leadership among millennials, providing practical implications for leadership development programmes and organisational strategies. Additionally, the theoretical framework builds on prior studies to offer a robust foundation for future research in this domain.

Chapter 2: Literature Review

2.1 Introduction

The scope of this study is to examine the relationship between personal values and authentic entrepreneurial leadership among Generation Y, with a comparative focus on the United Kingdom and Malaysia. Previous research has established strong associations between authentic leadership and positive organisational outcomes, such as follower satisfaction, workplace relationships, and a supportive work climate (Azanza, Moriano and Molero, 2013; Woolley, Caza and Levy, 2011). However, this study seeks to extend the discourse by exploring whether personal values influence the leadership approaches of millennial leaders within these two distinct cultural contexts.

Personal values have been widely investigated across various domains, including their role in shaping organisational vision, promoting ethical behaviour, explaining generational differences, and influencing entrepreneurial intentions (Gibson, Greenwood and Murphy, 2009; Dean, 2008; Karimi and Makreel, 2020). They have also been examined in relation to cross-cultural implications (Sagiv and Schwartz, 2022), organisational culture and performance (Ogbonna and Harris, 2000), and leadership effectiveness (Sosik, 2005; Dean, 2008; Bruno and Lay, 2008; Gao, 2015; Castillo, Adell and Alvarez, 2018; Črešnar and Nedelko, 2020). From a psychological perspective, personal values have been linked to individual characteristics, traits, behaviours, and social status (Parks-Lieduc, Feldman and Bardi, 2015; Roccas and Sagiv, 2010; Socci et al., 2021).

This chapter outlines the systematic process undertaken to identify and review the relevant literature, followed by a discussion of leadership theories that inform the conceptual framework of this study. Leadership theory has evolved from early models such as the Great Man and Trait theories to more contemporary approaches, including Situational and Transformational leadership. While numerous theories exist, this review focuses primarily on situational and transformational perspectives, as these provide significant contributions to the

understanding of leadership behaviour and underpin the theoretical rationale for this research.

2.2 Review Planning

Palmatier, Houston and Hulland (2018) identify three essential attributes of a high-quality literature review:

- a) Depth and rigour – the review should demonstrate a systematic and relevant strategy for selecting and evaluating sources.
- b) Replicability – the process should be transparent and structured in a way that allows other researchers to replicate the study.
- c) Practical utility – the review should provide value to both academic researchers and practitioners.

In addition, Snyder (2019) proposes a series of guiding questions to be considered at each stage of the review process (see Table 7).

Table 7. Literature review questions to consider

Phase 1: design
Is this review needed and what is the contribution of conducting this review?
What is the potential audience of this review?
What is the specific purpose and research question(s) this review will be addressing?
What is an appropriate method to use of this review's specific purpose?
What is the search strategy for this specific review? (Including search terms, databases, inclusion and exclusion criteria etc.)
Phase 2: conduct
Does the search plan developed in phase one work to produce an appropriate sample, or does it need adjustment?
What is the practical plan for selecting articles?
How will the search process and selection be documented?
How will the quality of the search process and selection be assessed?

Phase 3: analysis
What type of information needs to be abstracted to fulfil the purpose of the specific review?
What type of information is needed to conduct the specific analysis?
How will reviewers be trained to ensure the quality of this process?
How will this process be documented and reported?
Phase 4: structuring and writing the review
Are the motivation and the need for this review clearly communicated?
What standards of reporting are appropriate or this specific review?
What information needs to be included in the review?
Is the level of information provided enough and appropriate to allow for transparency so readers can judge the quality of the review?
The results clearly presented and explained?
Is the contribution of the review clearly communicated?

Source: Snyder (2019, p. 336)

Snyder (2019) outlines four key phases in the literature review process. Phase 1 involves designing the review, which requires determining the type of review to be conducted. For purposes of investigation and synthesis, a systematic review is recommended. Phase 2 focuses on conducting the review, which includes piloting the process and selecting articles based on predefined inclusion criteria. Phase 3 pertains to the analysis stage, where a standardised approach is applied to extract relevant information from each article. Finally, Phase 4 involves writing the review, ensuring transparency regarding the methodology and literature selection process.

Addressing research questions is an integral part of the review process, achieved by synthesising findings and perspectives from empirical studies (Snyder, 2019). In this study, all articles were selected based on inclusion criteria aligned with the research questions. A systematic literature review was adopted to provide a robust foundation for integrating empirical evidence into academic discussion (Kraus et al., 2022). This review adheres to Denyer and Tranfield's (2009) four principles of

systematic reviews: transparency, inclusivity, explanatory power, and heuristic value, each of which is discussed below.

- **Transparency:** The planning process involved defining inclusion and exclusion criteria. Peer-reviewed English-language journal articles published between 2000 and 2023 were included, while books, conference papers, reports, book chapters, dissertations, and these were excluded due to inconsistencies in peer review. The year 2000 was chosen as the starting point because millennials began entering the workforce during this period (Galdames and Guihen, 2020). This approach ensures relevance and supports the development of innovative concepts (Tranfield, Denyer and Smart, 2003) while enabling replication and refinement of leadership knowledge (Jones, Coviello and Tang, 2011).
- **Inclusivity:** Articles were selected based on their relevance to the research questions and validation through peer review (Podsakoff et al., 2005). The selection was not limited to high-impact journals but included all sources meeting the inclusion criteria.
- **Explanatory Power:** This principle relates to the ability of the review to identify and explain patterns that inform theory development. Where necessary, additional readings were consulted to address gaps in detail (Rojon, Okupe and McDowall, 2021).
- **Heuristic Value:** The final stage involves assessing whether the review provides actionable insights for academic and practical application, with clear links to the research questions (Rojon and McDowall, 2015).

The review adopts the CIMO framework (Context, Intervention, Mechanism, Outcome) proposed by Denyer, Tranfield and van Aken (2008). In this study, the context (C) is millennial leaders in two cultural settings; the intervention (I) is authentic entrepreneurial leadership; the mechanism (M) concerns personal values; and the outcome (O) relates to the impact of these values on leadership practices. The review contributes to the study in three ways:

1. Extending the literature and theoretical framework relevant to the study's variables.
2. Highlighting theoretical implications for millennial leaders.
3. Identifying potential outcomes of leadership theories from UK and Malaysian perspectives.

2.3 Meaning of Leadership

Leadership has been conceptualised in numerous ways throughout its scholarly exploration. One widely accepted definition describes leadership as an interaction between two or more members of a group engaged in constructing or reconstructing situations that influence members' perceptions and expectations (Bass, 1997, as cited in Dinibutun, 2020). Dinibutun argues that this practice becomes evident when leaders apply their values, knowledge, and cultural context. Similarly, Yukl (2012) defines leadership as a process of influence that facilitates relationships and coordinates the activities of others. Day and Harrison (2007) contend that leadership is an evolving construct, incorporating concepts such as shared leadership, making it difficult to confine to a single definition. Bass further asserts that leadership occurs when a group member alters the motivation or abilities of others, suggesting that leadership potential exists within any group member. Overall, there is consensus that leadership involves influencing group activities to achieve specific objectives (Girardi and Sarate, 2023).

Alban-Metcalf and Alimo-Metcalf (2011) identify five stages in the evolution of leadership theory:

1. Trait or "Great Man" theories (1930s)
2. Behavioural theories (1950s), leading to managerial and leadership competency models
3. Situational and contingency models, addressing the limitations of competency-based approaches
4. Leadership for managing constant change (late 1970s–1980s)
5. Heroic leadership behaviours, including ethical, authentic, and engaging leadership

Bolden and Gosling (2006) note that the concept of managerial competency was influenced by McClelland's work and the McBer consultancy group in the 1970s. Yacovelli (2019) identifies six core competencies for effective leadership: authenticity, courage, empathy, inclusive communication, relationship building, and cultural shaping. However, Bolden and Gosling (2006, p.150) caution that expanding competency frameworks risks embedding assumptions about leadership rather than challenging them. Guy Major (2021) argues that contemporary leaders require 21st-century competencies such as digital transformation, environmental stewardship, crisis management, and collaborative culture facilitation.

Hogan and Kaiser (2005) assert that leadership enables collective organisation, contributing to organisational success, while ineffective leadership can lead to follower dissatisfaction. Goleman, Boyatzis and McKee (2013) identify six leadership styles; visionary, coaching, affiliative, democratic, pacesetter, and commanding based on research involving 3,871 global executives. Of these, four styles (visionary, coaching, affiliative, and democratic) foster positive organisational climates, whereas pacesetter and commanding should be applied cautiously due to potential negative impacts.

Common leadership styles are often categorised as autocratic, democratic, laissez-faire, transactional, and transformational (Ekiyor and Dapper, 2019). Autocratic leaders exercise unilateral control, while democratic leaders adopt participatory approaches. Laissez-faire leaders grant autonomy to followers, whereas transactional and transformational leadership styles, discussed further in Section 2.4.1, emphasise structured exchanges and inspirational change, respectively. Cultural differences influence these styles: Malaysian leaders often adopt directive and autocratic approaches (Abdullah and Wahab, 2023), whereas UK leaders tend to favour participative or democratic styles (Khan, 2021).

Recent empirical research highlights destructive leadership behaviours (Woestman and Wasonga, 2015; Cohen, 2018). Neves (2014) found that socially or personally vulnerable employees are more susceptible to harassment and bullying

by leaders. Other unethical practices include favouritism, nepotism, and suppression of dissent (Schyns and Schilling, 2013). Samier and Milley (2018) introduce the concept of maladministration, encompassing harmful organisational behaviours such as negligence, fraud, abuse of power, and corruption.

Mackey et al. (2021) synthesised 418 empirical studies over two decades, identifying multiple forms of destructive leadership, including:

- a. Destructive Leadership – behaviours harmful to the organisation or followers.
- b. Abusive Supervision – subordinates' perceptions of hostile verbal and non-verbal behaviours by supervisors.
- c. Aversive Leadership – reliance on threats, intimidation, and punishment.
- d. Corrupt Leadership – leaders and followers engaging in dishonest practices for self-interest.
- e. Derailed Leadership – behaviours such as bullying, humiliation, manipulation, and harassment.
- f. Despotic Leadership – self-aggrandising and exploitative behaviours.
- g. Evil Leadership – committing physical and/or psychological harm.
- h. Exploitative Leadership – ego-driven behaviours that overburden followers and restrict development.
- i. Insincere Leadership – use of deceitful tactics to achieve personal goals.
- j. Insular Leadership – disregard for the health and well-being of others.
- k. Leader Bullying.
- l. Leader Exclusion – denying followers meaningful workplace relationships.
- m. Leader Incivility – rudeness and lack of regard for others.
- n. Leader Narcissism – driven by egocentric motives.

- o. Leader Undermining – suppressing positive interpersonal relationships.
- p. Negative Leadership.
- q. Personalised Charismatic Leadership – manipulating and disempowering followers for self-interest.
- r. Pseudo-Transformational Leadership – dominating and controlling followers under the guise of transformation.
- s. Petty Tyranny – oppressive and vindictive use of power.
- t. Toxic Leadership – destructive behaviours combined with dysfunctional personal traits.
- u. Tyrannical Leadership – achieving results at the expense of followers.

These findings underscore the dual nature of leadership, encompassing both constructive and destructive dimensions, and highlight the importance of ethical and authentic leadership practices in contemporary organisational contexts. Harris and Jones (2018) argue that these detrimental practices warrant further investigation to expose the lived experiences of those affected and to restore trust in leadership.

Further research indicates that followers under autocratic leaders exhibit lower trust, reduced positive emotions, and diminished work performance (Shen, Chou and Schaubroeck, 2019; Wang, Liu and Liu, 2019). Authoritarian leadership values often include tradition, conformity, and security (Fasce and Avendaño, 2020), as well as respect for elders, obedience, and good manners (Harms et al., 2018). Recent reviews associate authoritarianism with terms such as toxic, abusive, narcissistic, intimidating, micromanaging, and arrogant, reflecting the “dark side” of leadership (Kiliç and Günsel, 2019; Gandolfi and Stone, 2022; Mehraein, Visintin and Pittino, 2023). These findings align with increasing reports of corporate failures and employee mistreatment in recent years.

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An understanding of the evolution of leadership narratives is essential, particularly those relevant to Generation Y. The following section evaluates selected leadership theories that form the basis for the theoretical framework of this study.

2.4 Leadership Theories

Benmira and Agboola (2021) categorise leadership theories into four broad groups. The first includes the Great Man Theory and Trait Theory, dominant in the 19th century, which posit that leaders are either born with inherent qualities (Great Man) or can be both born and developed (Trait). The second category, Behavioural Theories, asserts that leaders are made and that specific behaviours can be learned and cultivated. The third category comprises Contingency and Situational Theories, which emphasise the importance of contextual factors in determining the most appropriate leadership style. Finally, New Leadership Theories, such as transactional and transformational leadership, highlight the complex and dynamic relationships between leaders and followers. These contemporary theories, particularly those grounded in humanistic principles, underscore the link between leadership style and motivation, suggesting that adaptability in leadership approach is a critical determinant of employee engagement and productivity (Buble, Juras and Matic, 2014).

The authors further argue that three key variables influence leadership styles: the characteristics of the leader, the characteristics of the followers, and the characteristics of the situation.

Building on this foundation, the following sections examine seminal leadership theories including transactional, transformational, collaborative, situational, paternalistic, authentic, and entrepreneurial leadership to provide insights into leadership development and its relevance to the present study.

2.4.1 Transactional Leadership and Transformational Leadership

Burns (1978, cited in Febrian, Rajab and AR, 2023) conceptualised transactional leadership as a leadership approach grounded in exchanges between leaders and followers, whereby compliance is secured through rewards and sanctions in pursuit of organisational and individual objectives. This model reflects bureaucratic principles and hierarchical power structures, prioritising task completion and adherence to established rules. Transactional leaders typically employ contingent rewards such as salary increments or promotions and

corrective mechanisms, including management by exception, to monitor performance and intervene when standards are not met (Hoxha, 2019). These exchanges clarify roles, reinforce compliance, and ensure the achievement of predetermined goals (Udayanga, 2020). Empirical evidence suggests that transactional leadership can enhance organisational performance under certain conditions (Kitta and Salim, 2022; Abdelwahed, Soomro and Shah, 2022).

However, the literature presents a nuanced view of its effectiveness. While transactional leadership may contribute to high performance in structured environments, it is criticised for constraining creativity and long-term development (Dong, 2023). Its reliance on extrinsic motivators and rigid control mechanisms has been linked to diminished innovation and follower autonomy (Saleh et al., 2018). Furthermore, VanderPal (2022) argues that transactional leadership addresses only lower-order needs, fostering job dissatisfaction and limiting opportunities for self-development. McCleskey (2014) similarly contends that such a control-oriented system is increasingly incompatible with contemporary leadership paradigms.

In contrast, transformational leadership, as articulated by Burns (1999, cited in Greimel, Kanbach and Chelaru, 2023), seeks to inspire followers through charisma, intellectual stimulation, and individualised consideration. This approach encompasses four dimensions: idealised influence, inspirational motivation, intellectual stimulation, and individual consideration (Ghasabeh and Provitera, 2017). Transformational leadership has been associated with enhanced job satisfaction, organisational commitment (Khan et al., 2020), and the reinforcement of moral and ethical values (Sun, Chen and Zhang, 2017). It is also linked to trust-building (Ghasabeh and Provitera, 2017) and value alignment between employees and organisations (Pandey et al., 2016).

Moreover, transformational leadership has demonstrated positive correlations with corporate social responsibility (CSR) engagement (Du et al., 2013; Jadon and Johri, 2015; Liotopoulos, 2023) and employee engagement through perceived CSR initiatives (Besieux et al., 2018; Ogonegbu and Kyongo, 2023). Despite these

benefits, critics argue that transformational leadership may encourage followers to subordinate personal interests to organisational goals, raising ethical concerns (VanderPal, 2022; Tedia and Vilas, 2022). Additionally, the theory has been criticised for insufficiently accounting for contextual variables (Chen et al., 2018) and for its potential association with narcissistic tendencies among leaders (O'Reilly and Chatman, 2020). Bednall et al. (2018) further challenge the assumption of a linear leader–follower relationship, suggesting a more complex, non-linear dynamic.

Both leadership styles have been examined in relation to generational cohorts, including millennials (Aube, 2015; Anderson et al., 2017; Andi, 2018). Age-related factors may influence the adoption of transactional leadership, particularly in implementing diversity practices, with older leaders demonstrating greater propensity for such initiatives (Walter and Scheibe, 2013; Tziner and Shkoler, 2018). This tendency is attributed to accumulated social experience, cultural intelligence (Ang et al., 2006), and a desire to establish a legacy (Dobel, 2005; Woods et al., 2020). Conversely, Malaysian studies indicate a stronger preference for transformational leadership over transactional approaches (Hoxha, 2019), with more recent research highlighting a shift towards ethical and servant leadership models (Ab Rahman and Jantan, 2020; Hassan et al., 2022). These divergent findings underscore the need for further cross-cultural investigation into leadership preferences and their underlying drivers.

2.4.2 Collaborative Leadership

Collaborative leadership is frequently associated with the concept of shared leadership, emphasising collective engagement and interdependence among organisational members (VanVactor, 2012). This approach is characterised by participatory practices that enhance motivation, moral responsibility, and mutual accountability within teams. Empirical studies (Friedrich et al., 2006; Little and Little, 2006; Endres and Weibler, 2020) highlight the centrality of group culture in fostering collaboration, with Kramer and Crespy (2011) arguing that leaders reinforce such cultures by actively valuing members' contributions and

demonstrating interest in their ideas. Positive and supportive communication behaviours are considered essential for sustaining collaborative environments.

Raelin (2006) identifies four conditions underpinning effective collaborative leadership: concurrency, which requires tolerance for multiple leaders within a group; collectivity, where members align their actions with shared objectives; mutuality, involving shared responsibility for decisions and outcomes; and compassion, which prioritises human development and inclusivity, even when divergent perspectives challenge existing norms.

The prominence of collaborative leadership has grown within dynamic leadership theory and network governance literature (Hsieh and Liou, 2018). Evidence suggests that collaborative practices contribute to enhanced productivity, employee satisfaction, and the success of self-managed teams (Kramer and Crespy, 2011). Getha-Taylor and Morse (2013) further argue that collaborative leadership requires a distinct skill set, including strategic and systems thinking, facilitation, stakeholder engagement, and the ability to foster mutual learning. Morrison and Arthur (2013) contend that collaborative leadership is increasingly positioned as a defining framework for 21st-century leadership.

However, the literature also acknowledges significant challenges. Bossidy and Charan (2002) caution that inter-organisational silos and resource control can undermine collaborative efforts. Archer and Cameron (2009) report that 64% of senior leaders in their study identified gaps in collaborative leadership skills, a figure rising to 73% in large organisations. Similarly, Shaikh, Lämsä and Heikkinen (2022) note that conflicting values among participants can impede collaboration. Carucci and Velasquez (2022) reinforce this concern, citing evidence that 32% of senior managers resist relinquishing control, while 39% of employees perceive organisational reluctance to collaborate. James, Mann and Creasy (2007) further highlight the ambiguity and uncertainty inherent in collaborative leadership, particularly regarding role clarity and power dynamics.

From a generational perspective, millennials appear well-suited to collaborative leadership due to their preference for connectivity and teamwork. Balda and Mora

(2011) argue that millennials exhibit a strong inclination towards dialogue and continuous communication with supervisors, while Burke (2004) observes their tendency to reward collaborative efforts. Williams (2016) similarly infers that this cohort's work ethic aligns with collaborative leadership principles, suggesting its potential relevance for millennial leaders in contemporary organisational contexts.

2.4.3 Situational Leadership

Hersey and Blanchard's situational leadership theory emphasises the adaptability of leadership style based on followers' levels of competence and commitment, often referred to as their "maturity" (Toprak, 2020). The model posits that leadership effectiveness depends on aligning task-oriented and relationship-oriented behaviours with follower readiness. Task-oriented leaders prioritise role clarification, structured processes, and directive communication, whereas relationship-oriented leaders focus on conflict resolution, participatory decision-making, and fostering positive interpersonal dynamics (Toprak, 2020).

The theory identifies four leadership styles namely telling, selling, participating, and delegating, which correspond to varying degrees of follower maturity (Tanasyah, Putrawan and Tanasyah, 2022). Telling is suited to followers with low competence and commitment, requiring explicit instructions and close supervision. Selling applies to followers with limited ability but moderate willingness, necessitating guidance and persuasive communication. Participating targets followers with adequate ability but low confidence, where leaders act as facilitators and share decision-making. Delegating is appropriate for highly competent and motivated followers, granting autonomy in task execution.

Situational leadership remains popular among managers due to its intuitive appeal, simplicity, and perceived relevance to managerial functions (Avery and Ryan, 2002). Empirical evidence suggests that millennials exhibit a stronger preference for situational leadership compared to Generation X (Kaifi et al., 2014), with some scholars arguing that its adaptability makes it particularly suitable for managing this cohort (Ceil, 2019). Supporting this view, Firmansyah, Maharani and

Wihadanto (2022) found that situational leadership positively influenced employee engagement among millennials in Indonesian state-owned enterprises.

Despite its practical appeal, situational leadership has been subject to significant criticism. McCleskey (2014) argues that the theory's exclusive focus on leader behaviours neglects personality traits and other individual differences. Bass (2008) highlights contradictions and ambiguities within the model, while Glynn and DeJordy (2010) question its reliance on abstract leadership styles that lack clear operationalisation. Furthermore, Papworth, Milne and Boak (2009) contend that situational leadership suffers from insufficient empirical validation, internal inconsistencies, and failure to account for follower characteristics such as personality.

2.4.4 Paternalistic Leadership

Paternalistic leadership is commonly defined as a style that combines authority and discipline with benevolence and moral integrity (Farh et al., 2006), encompassing three core dimensions: authoritarianism, benevolence, and moral leadership (Lau, 2012). While this approach has gained increasing attention globally, its conceptualisation remains contested due to its association with authoritarian tendencies (Uhl-Bien and Maslyn, 2005).

Empirical evidence suggests that paternalistic leadership is highly context dependent. Pellegrini, Scandura and Jayaraman (2010), for example, found that paternalistic leadership significantly enhanced job satisfaction in India but had no comparable effect in the United States. Their study further revealed that, within both cultural contexts, paternalistic leadership positively influenced leader-member exchange and organisational commitment. Similarly, Johennesse and Chou (2017) argue that paternalistic leadership, particularly the notion that "age commands respect" is deeply embedded in Asian cultural norms, including Taiwan. However, Mansur, Sobral and Goldszmidt (2017) highlight a persistent gap in cross-cultural research examining paternalistic leadership from a global perspective.

Further studies reinforce the cultural embeddedness of this leadership style. Ruiz, Wang and Hamlin (2013) report that Mexican managers adopt paternalistic leadership to reconcile national cultural expectations with organisational norms, while Patel (2003) observes similar patterns in India and China, where hierarchical structures remain largely unchallenged. In these contexts, paternalistic leadership is perceived as legitimate and expected. Among millennials, evidence is mixed: research in Pakistan indicates that benevolent and moral dimensions of paternalistic leadership positively influence job satisfaction, whereas its authoritarian dimension has a negative effect (Islam et al., 2022). Comparable findings emerge from Indonesia, where millennials generally expressed satisfaction with paternalistic leadership practices (Nurchayanto, Rofiaty and Rahayu, 2018).

The persistence of paternalistic leadership in Asia suggests that external employees operating in these contexts must adapt to leadership practices grounded in authority, benevolence, and morality (Zhuang et al., 2022). Conversely, its relevance in Western contexts appears limited. Studies by Aycan (2006), Pellegrini and Scandura (2006), and Rawat and Lyndon (2016) indicate that paternalistic leadership is predominantly an Asian phenomenon, with minimal traction in Western organisational cultures. Cardy and Selvarajan (2001) further note that non-Western cultures often favour paternalistic leadership models characterised by limited employee participation at lower hierarchical levels.

Nevertheless, the association between paternalism and authoritarianism remains problematic. From a Western perspective, this linkage risks transforming benevolence into exploitation and concern into control, thereby shifting the leadership dynamic towards authoritarianism (Uhl-Bien and Maslyn, 2005; Aycan, 2006). Such critiques underscore the need for further empirical research to disentangle paternalistic leadership from authoritarian practices and to assess its applicability across diverse cultural and generational contexts. A summary of the different leadership theories are presented in Table 8.

Table 8. Summary of leadership theories

Transformational	Transactional	Paternalistic	Collaborative
Transformational leaders ready to discuss with employees about plans before execution.	Transactional leaders do not feel easy to discuss with employees about plans.	The leader assumes the role of the parent, the father who knows best.	Collaborative leaders work through alliances, coalitions and partnerships.
Employees complete goal through superior principles and ethics.	Leader set rewards and punishments for employees to accomplish the goal.	Look after, nurture, guide, protect, and behave generally like a father behaves toward his children, exhibits concern for the subordinates' general well-being.	Focuses on the mutual influence among members of a less hierarchical, more egalitarian team.
Motivates employees by giving priority to group interests first.	Motivates employees by tempting their self-interest.	Tend not to defer to the subordinates' wishes but instead maintains a sense of hierarchy and expect obedience.	Similar in its emphasis on a 'shared goals' orientation.
Works to transform the organisational	Works surrounded by the	Paternalistic leaders 'interfere' with the liberty or	Often involves bidirectional learning,

traditions by implementing new thoughts.	organisational traditions.	autonomy of the subordinate without his or her consent.	organisational learning to promote intellectual stimulation.
Individualized reflection: Each behaviour is intended for each person to convey kindness and support.	Management-by-exception: continue the status quo; pressure correct actions to recover performance.		
Intellectual stimulation: support new and creative ideas to solve problems.			

Adapted from Narayanan et al. (2020) pp. 135 – 136.

2.4.5 Authentic Leadership

Authentic leadership has its roots in positive psychology, particularly in concepts of personal growth and self-fulfilment (Braun and Peus, 2018). This perspective positions authentic leadership as a developmental construct, an idealised notion shaped by subjective interpretation rather than an objective reality (Ursachi, Horodnic and Zait, 2015). The seminal work of Luthans and Avolio (2003) is widely regarded as the foundation for contemporary interest in authentic leadership, building on Avolio's research on leadership and Luthans' contributions to positive organisational behaviour (Caza and Jackson, 2011).

The psychological dimension of authenticity is further emphasised by Harter (2002), who identifies two core elements: self-awareness and behavioural congruence with one's true self. Oktar and Lombrozo (2022) argue that authenticity

is often guided by intuition rather than deliberate reasoning in decision-making processes. However, Caza and Jackson (2011) caution that authentic leadership is shaped not only by individual traits but also by environmental factors, a view supported by Avolio (2005) and Shamir and Eilam (2005), who suggest that formative life experiences and critical events significantly influence authentic leadership development.

Authentic leadership is frequently grouped with other positive leadership paradigms, including transformational, ethical, and servant leadership (Avolio and Gardner, 2005; Hoch et al., 2018), and is often classified within the “newer genre” of leadership theories (Hannah et al., 2014). Its philosophical origins trace back to Greek thought, where authenticity denotes being “true to oneself” (Avolio and Gardner, 2005). Bishop (2013, p. 6) conceptualises authenticity as “an ever-evolving process of discovery rooted in the self but existent within the confines of relationships amid congruent values,” underscoring its intrinsic link to personal values (Leroy, Palanski and Simmons, 2012).

Walumbwa et al. (2008, p. 94) provide a widely cited definition of authentic leadership as:

“A pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development.”

The growing prominence of authentic leadership is partly attributed to corporate scandals and ethical failures, which have intensified calls for integrity-driven leadership (Zhang et al., 2022). Scott, Carr-Chellman and Hammes (2020) position authentic leadership within the broader category of “profound leadership,” highlighting its emphasis on employee well-being and work-life balance rather than mere productivity. Kelemen et al. (2022) note conceptual overlaps between authentic and humble leadership, particularly in relation to self-awareness and

value-driven behaviour. Cross-cultural studies further demonstrate the positive relationship between authentic leadership and follower outcomes across diverse national contexts (Laguna et al., 2019; Bakari and Hunjra, 2017).

From a generational perspective, millennials exhibit a strong preference for authentic leaders who demonstrate integrity and consistency between words and actions (Hobart and Sendek, 2014). Andi's (2018) study of Malaysian millennials reinforces this view, identifying moral character, expertise, and reflective practice as desirable attributes. Authentic leadership has been linked to positive organisational outcomes, including commitment (Peus et al., 2012), engagement (Wang and Hsieh, 2013), and well-being for both leaders and followers (Ilies, Morgeson and Nahrgang, 2005; Lundqvist, Wallo and Reineholm, 2023). Jensen and Luthans (2006) further demonstrate its relevance in entrepreneurial contexts, where authentic leadership correlates with job satisfaction and organisational commitment.

Authentic leadership is operationalised through four behavioural dimensions: self-awareness, balanced processing, internalised moral perspective, and relational transparency (Walumbwa et al., 2008). Self-awareness entails continuous reflection on personal strengths, weaknesses, and values (Avolio and Gardner, 2005), while balanced processing involves objective evaluation of information and openness to dissenting views (Gardner et al., 2005; Kliuchnikov, 2011). Internalised moral perspective reflects decision-making guided by deeply held ethical principles, and relational transparency denotes openness and honesty in leader-follower interactions.

Despite its appeal, authentic leadership is not without critique. Some scholars question its practical applicability, citing tensions between authenticity and organisational demands (George, 2003; Green, 2014). Others argue that its conceptual overlap with existing leadership theories raises concerns about theoretical distinctiveness (Ladkin and Taylor, 2010). Nonetheless, its emphasis on values, ethics, and psychological well-being positions authentic leadership as a

critical framework for addressing contemporary leadership challenges, particularly in contexts involving millennial leaders.

Internalised moral perspective refers to the self-regulation of behaviour guided by deeply held moral values rather than external pressures (Northouse, 2013). This dimension ensures behavioural consistency aligned with personal beliefs and ethical standards (Cronin, 2006), functioning as an integrated system of internalised values that influence decision-making (Crawford et al., 2020). Leaders demonstrating this attribute exhibit autonomy in ethical judgement, resisting situational or organisational pressures that conflict with their moral compass.

Relational transparency involves the open sharing of one's authentic self, such as thoughts, feelings, and intentions with followers to foster trust and mutual respect (Gardner et al., 2005). This process is critical for building collaborative relationships and promoting psychological safety within teams. Gatling et al. (2017) identify trust and intimacy as mediating factors linking relational transparency to positive follower outcomes, while Popper and Lipshitz (2000) argue that transparency enhances organisational learning by encouraging feedback and reflective dialogue.

2.4.5.1 Authentic Leadership and Values

Authentic leadership is inherently value-driven, requiring leaders to act consistently with their beliefs (Avolio et al., 2004). Michie and Gooty (2005) highlight the role of self-transcendent values such as social justice, equality, honesty, loyalty and positive emotions like gratitude and empathy in shaping authentic leadership. These values will inform the conceptual framework of the present study. However, Sidani and Rowe (2018) challenge the classification of authentic leadership as a leadership style, framing it instead as a legitimisation process contingent on followers' perceptions of leader genuineness. This perspective shifts the emphasis from leader behaviour to follower attribution, underscoring the relational nature of authenticity.

2.4.5.2 Authentic Followership and Outcomes

Shamir and Eilam (2005) introduce the concept of authentic followership, wherein followers align with leaders based on shared values and convictions, validating the leader's authenticity. Empirical studies link authentic leadership to enhanced follower performance (Clapp-Smith, Vogelgesang and Avey, 2009; Wang et al., 2014), organisational commitment (Leroy et al., 2015), job performance (Wong and Cummings, 2009), and trust (Hsieh and Wang, 2015). Hannah, Walumbwa and Fry (2011) further demonstrate the transferability of authenticity from leaders to followers. However, Anderson et al. (2017) caution that millennials' individualistic tendencies may hinder alignment with leaders' values, a claim contested by Pinelli et al. (2018), who argue that followers respond to leaders as individuals rather than generational archetypes.

Cross-cultural evidence reinforces these dynamics. In Malaysia, self-awareness emerged as the most influential dimension of authentic leadership, followed by internalised moral perspective, relational transparency, and balanced processing (Opatokun, Hasim and Hassan, 2013), consistent with findings by Walumbwa et al. (2008) and Gardner et al. (2005).

2.4.5.3 Psychological Perspective of Authenticity

Kernis (2003) conceptualises authenticity through a self-esteem lens, comprising four components: awareness, unbiased processing, action, and relational orientation. Awareness entails recognising one's emotions, motives, and traits; unbiased processing involves accepting strengths and limitations without distortion; action reflects behaviour congruent with core values; and relational orientation denotes honesty in interpersonal interactions, including the expression of both positive and negative emotions. This multidimensional view underscores the complexity of authenticity as both an intrapersonal and interpersonal construct.

Walumbwa et al. (2008) emphasise that authentic leadership is grounded in values such as honesty, integrity, and a strong moral compass, aligning with the principles of positive psychology. This focus on trustworthiness is increasingly demanded by

societies in response to corporate scandals and governance failures (Northouse, 2013; Onyalla, 2018). Walumbwa et al. (2008) argue that authentic leaders who act consistently with high moral standards inspire followers to engage in self-reflection and enhance their work performance. Over time, followers may internalise these values, fostering intrinsic motivation and personal growth. However, these mechanisms are not exhaustive; organisational culture, societal norms, personality traits, and group dynamics also influence follower behaviour.

2.4.5.4 Critiques of Authentic Leadership

Despite its appeal, authentic leadership has faced significant criticism. Alvesson and Einola (2019) argue that the concept is idealistic and impractical, creating unrealistic expectations of leaders. Ford and Harding (2011) contend that the model portrays an overly virtuous image of leadership, neglecting human imperfections, while Spoelstra, Butler and Delaney (2016) question its measurability. Critics also highlight its individualistic orientation, which underplays the social and contextual nature of leadership (Alvesson and Einola, 2019).

Ethical debates further complicate the discourse. Rego, Lopes and Simpson (2017) propose a typology that includes authentic, Machiavellian, and “Machiavellianly authentic” leaders, the latter blending authenticity with manipulative intent. High levels of Machiavellianism have been shown to negatively affect authentic leadership behaviours (Sendjaya et al., 2016). Owens and Hekman (2012) add nuance by demonstrating that leaders can be authentic about negative traits such as arrogance, challenging the assumption that authenticity is inherently virtuous.

2.4.5.5 Defending the Construct

Proponents argue that authentic leadership should be viewed as a developmental process rather than a fixed state (Gardner et al., 2005; Gardner et al., 2021). Northouse (2013) supports this perspective, framing authenticity as an outcome of psychological growth, driven by needs for autonomy, competence, and relatedness (Gardner et al., 2021). Empirical evidence links authentic leadership to

positive organisational outcomes, reinforcing its practical relevance (Helmuth, Cole and Vendette, 2023).

2.4.5.6 Measurement and the ALQ Debate

Walumbwa et al. (2008) operationalised authentic leadership through the Authentic Leadership Questionnaire (ALQ), a 16-item instrument measuring four dimensions: relational transparency (RT), internalised moral perspective (IM), balanced processing (BP), and self-awareness (SA). The authors claim cross-cultural applicability, supported by studies in diverse contexts (Caza et al., 2010). However, Neider and Schriesheim (2011) question the ALQ's content validity, citing reliance on subjective judgments during development, while Iszatt-White et al. (2019) argue that the tool may fail to capture the complexity of authenticity. Despite these concerns, the ALQ remains widely used due to its theoretical robustness and adaptability (Gardner et al., 2011; Rautenbach and Rothmann, 2017).

Cross-cultural validation studies demonstrate ALQ's applicability in countries with varying cultural dimensions, including the USA, China, and New Zealand (Caza et al., 2010), as well as Belgium (Leroy, Palanski and Simons, 2012), Portugal (Rego et al., 2012), Turkey (Müceldili, Turan and Erdil, 2013), Brazil (Cervo et al., 2016), Romania (Petan and Bocarnea, 2016), Pakistan (Akbar, Ali and Ahmad, 2019), and others (Arceño, Ag and Adamu, 2019; Olsen, Johansen and Hystad, 2021; Damianou et al., 2022). Its extensive use in leadership research underscores its relevance, though scholars continue to call for refinement and contextual adaptation (Kulophas, Ruengtrakul and Wongwanich, 2015; Srivastava and Dhar, 2019).

For the present study, the ALQ is adopted due to its widespread application across cultures and organisational settings, as well as its consolidated structure (Roof, 2014; Oh, Cho and Lim, 2018). However, this research acknowledges the ongoing debate regarding its validity and the need for further cross-cultural exploration (Cervo et al., 2016).

2.4.6 Entrepreneurship

The relationship between entrepreneurship and economic development has been extensively documented, with scholars emphasising its role in fostering innovation and competitiveness. Zaech and Baldegger (2017) propose a model linking leadership behaviour to start-up performance, addressing a notable gap in empirical research. They argue that entrepreneurs often underestimate the importance of leadership capabilities, despite evidence suggesting that leadership behaviours significantly influence business outcomes.

Corporate entrepreneurship, as defined by Javalgi et al. (2014), refers to entrepreneurial activities within established organisations, encompassing innovation, new venture creation, strategic renewal, proactivity, and risk-taking (Schmelter et al., 2010). These dimensions underscore the strategic role of entrepreneurial leadership in sustaining organisational growth and adaptability.

Entrepreneurship has been characterised as a “jack-of-all-trades” phenomenon, requiring individuals to possess a broad skill set to initiate and manage ventures (Lazear, 2005). Lazear further posits a correlation between entrepreneurial activity and educational systems, particularly in relation to specialisation. Levie (2007) corroborates this by establishing a positive relationship between education and entrepreneurial intent in the UK, noting that early-stage entrepreneurial activity peaks between the ages of 25 and 44, a demographic aligned with Generation Y, the focus of this study. Family background also emerges as a critical determinant, with parental entrepreneurship or involvement in family businesses significantly increasing entrepreneurial propensity (Levie, 2010).

Global Entrepreneurship Monitor (GEM) data reveal stark contrasts in early-stage entrepreneurial activity (TEA) between the UK (8.2%) and Malaysia (21.6%) (Bosma and Kelley, 2018; GEM, 2018). TEA encompasses nascent entrepreneurship and ownership of new ventures (Levie and Hart, 2011). Within Malaysia, intergenerational business succession is prevalent among Chinese and Indian communities, where younger generations often inherit family enterprises (Yen, Toeh and Chong, 2014). Michel et al. (2014) argue that entrepreneurial skills,

personality traits, and behavioural patterns are frequently transmitted through family socialisation, while Bindah (2017) highlights the role of familial support in providing psychological and social resources.

Entrepreneurial attitudes and attributes remain contested in the literature. Mohammed et al. (2012) identify demographic factors, technical education, cultural norms, and social and financial support as key antecedents. Beyond these structural factors, entrepreneurs are often associated with psychological traits such as intuition, achievement orientation, and risk tolerance (Coronel-Pangol et al., 2023). Cognitive capabilities, particularly opportunity recognition and strategic decision-making combined with high intrinsic motivation, are also considered critical for entrepreneurial success (Ranjan, 2018).

These perspectives collectively underscore the multifaceted nature of entrepreneurship, integrating individual traits, socio-cultural influences, and structural conditions. For the present study, these insights provide a conceptual foundation for examining entrepreneurial leadership within SMEs and its intersection with authentic leadership among millennial leaders in the UK and Malaysia.

2.4.6.1 Entrepreneurial Leadership

Entrepreneurial leadership represents an intersection of leadership, defined as the process of influencing others (Yukl, 2008), and entrepreneurship, which involves recognising and exploiting opportunities within dynamic environments (Renko et al., 2015). Renko et al. conceptualise entrepreneurial leaders as both “entrepreneurial accelerators”, who encourage innovation and challenge the status quo, and “entrepreneurial doers”, who act as role models by engaging in entrepreneurial activities and fostering learning through example. This dual role underscores the strategic imperative for organisations to cultivate entrepreneurial behaviours to sustain competitiveness (Mokhber et al., 2016).

The definition adopted for this study aligns with Renko et al. (2015, p. 55):

“Influencing and directing the performance of group members toward the achievement of organisational goals that involve recognising and exploiting entrepreneurial opportunities.”

Despite growing interest, empirical research on the impact of entrepreneurial leadership on follower outcomes remains limited (Gupta, MacMillan and Surie, 2004; Newman et al., 2017). This gap is particularly salient given the alignment between entrepreneurial leadership and millennial characteristics such as innovation and risk-taking (Koloba and May, 2014).

Entrepreneurship, Culture, and Leadership Overlap

Cross-cultural studies reveal significant associations between entrepreneurship and Hofstede’s cultural dimensions, particularly individualism, long-term orientation, and indulgence (Çelikkol, Kitapçı and Döven, 2019). However, the mechanisms underlying these relationships remain underexplored, prompting calls for more context-sensitive research (Stephan, 2022). Entrepreneurial leadership is often linked to transformational leadership (Renko et al., 2015; Zaeck and Baldegger, 2017) and creativity-enhancing leadership, with evidence suggesting that transformational leadership positively influences corporate entrepreneurship (Ceptureanu et al., 2017; Chang et al., 2017; Ocak and Ozturk, 2018; Shafique and Kalyar, 2018). Oc et al. (2023) argue that while leadership focuses on influencing followers, entrepreneurship operationalises these influences into tangible actions, highlighting the conceptual overlap between the two domains.

Core Characteristics and Theoretical Perspectives

Fernald, Solomon and Tarabishy (2005) identify vision, problem-solving, decision-making, risk-taking, and strategic orientation as defining characteristics of entrepreneurial leaders. Leitch and Thierry (2017) further argue that entrepreneurial leadership is a viable construct for three reasons:

1. Entrepreneurs inherently assume leadership roles.

2. Both leadership and entrepreneurship literature emphasise personal traits and characteristics.
3. Entrepreneurial leadership shares commonalities with authentic, charismatic, and transformational leadership.

Entrepreneurs are frequently described as authentic leaders, given their alignment with personal values and ability to inspire followers through transparency and self-awareness (Jensen and Luthans, 2006). This conceptual convergence forms a critical foundation for the present study, which examines authentic entrepreneurial leadership among millennial leaders.

Practical and Cultural Considerations

Kempster and Cope (2010) note that entrepreneurs often assume leadership roles out of necessity rather than choice, while Vecchio (2003) questions whether entrepreneurial leadership constitutes a distinct construct, suggesting it may be context-specific to start-ups and high-growth firms. Empirical evidence from Malaysia indicates that entrepreneurial leadership attributes such as accountability, analytical thinking, and emotional intelligence positively influence micro-enterprise performance (Mamun et al., 2018). However, Gupta, MacMillan and Surie (2004) caution that the effectiveness of entrepreneurial leadership may vary across cultures, a view supported by Kaye and Hassan's (2013) development of an Islamic model of entrepreneurial leadership.

Bagheri and Harrison (2020) provide further cross-cultural insights through a comparative study of postgraduate students in Iran (collectivist, high power distance) and Scotland (individualistic, low power distance), identifying key competencies and behaviours associated with entrepreneurial leadership. Thornberry's (2006) five-dimensional model comprising general entrepreneurial behaviour, explorer, miner, accelerator, and integrator behaviours that offers a contemporary framework integrating transformational, transactional, and charismatic leadership elements, with a strong emphasis on innovation and risk-taking (see Table 9).

Table 9. Thornberry's five dimensional entrepreneurial leadership model

Dimension	Explanation
General Behaviour	Leaders' ability to display entrepreneurial behaviour and enabling innovative behaviour environment
Explorer Behaviour	Leaders' action in spotting new opportunities and increasing organisation's creative policies
Miner Behaviour	Creative execution of leadership tasks to solve organisational problems.
Accelerator Behaviour	Ability to use leader's skills to stimulate subordinates' innovative thinking and creation of positive work environment.
Integrator Behaviour	Leaders' ability to effectively communicate organisation's goals and empower staff to participate in decision making process.

Source: Adapted from Dahiru et al. (2017)

The general behaviour of entrepreneurial leaders reflects their ability to internalise entrepreneurial attitudes and translate them into actions that foster a supportive organisational climate conducive to innovation and risk-taking (Thornberry, 2006). This behavioural orientation encourages followers to adopt entrepreneurial practices, thereby enhancing organisational adaptability and competitiveness.

Gupta, MacMillan and Surie (2004) conceptualise entrepreneurial leadership through two interrelated dimensions: scenario enactment and cast enactment. Scenario enactment involves envisioning potential opportunities and designing strategic pathways to exploit them, while cast enactment focuses on assembling a team with the requisite competencies and resources to implement these strategies (Selvaraja and Pihie, 2017). These dimensions underscore the dual

emphasis on strategic foresight and human capital mobilisation in entrepreneurial leadership.

Among the various models proposed, Thornberry's (2006) framework remains one of the most influential, integrating elements of transformational, transactional, and charismatic leadership (Pihie et al., 2018). Thornberry operationalised this model through the Entrepreneurial Leadership Questionnaire (ELQ), a 50-item instrument measuring five behavioural dimensions:

1. General Entrepreneurial Behaviour – embedding entrepreneurial attitudes in leadership practices.
2. Explorer Behaviour – identifying and pursuing new opportunities.
3. Miner Behaviour – extracting value from existing resources and processes.
4. Accelerator Behaviour – driving rapid implementation of innovative ideas.
5. Integrator Behaviour – aligning diverse organisational elements to support entrepreneurial initiatives.

The ELQ provides a structured approach to assessing entrepreneurial leadership, offering both theoretical depth and practical applicability. Table 10 summarises the key models and their respective dimensions.

Table 10. Studies on Entrepreneurial Leadership Measurement

Authors	Dimensions	Key Findings
Fontana and Musa (2017)	Strategic; communicative; motivational; personal/organisational	Significant impact of entrepreneurial leadership in fostering all elements in the innovation process including idea generation, idea selection and

		development and idea diffusion
Kim et al. (2017)	Framing the challenge; Absorbing uncertainty; Path-clearing; Building commitment; Specifying limits	Co-worker and organisational support have significant positive influence on entrepreneurial leadership. Entrepreneurial leadership has significant positive impact on affective and cognitive trust of employees
Renko et al. (2015)	One	Entrepreneurial leadership is more prevalent among founder-leaders than non-founder leaders. Entrepreneurial leadership has significant relationship with entrepreneurial orientation, transformational leadership, and creativity-supportive leadership
Huang et al. (2014)	Framing the challenge; Absorbing uncertainty; Underwriting; Building	Entrepreneurial leadership positively influences both

	commitment; Defining gravity	exploratory and exploitative innovations which is positively associated with new venture performance
Chen (2007)	One	Entrepreneurial leadership significantly influences team members' creativity and new venture's innovative capability
Thornberry (2006)	General entrepreneurial leader behaviour; explorer behaviour; miner behaviour; accelerator behaviour; integrator behaviour	Entrepreneurial leadership is transformational and transactional in nature
Gupta, MacMillan and Surie (2004)	Framing the challenge; absorbing uncertainty; path clearing; building commitment; specifying limits	Found cross-cultural and universal nature of entrepreneurial leadership

Source: Adapted from Bagheri and Harrison (2020)

Despite its growing prominence, entrepreneurial leadership as a construct faces several criticisms. Thornberry's (2006) model, while widely cited, has been criticised for lacking situational sensitivity, a key aspect of leadership theory (Zali, 2013). Winkler (2010) argues that leadership behaviour is shaped by an interplay of personal, situational, and behavioural factors, suggesting that any model omitting contextual considerations risks oversimplification. Similarly, Gupta, MacMillan and Surie's (2004) framework has been critiqued for failing to specify the foundational dimensions of entrepreneurial leadership and for neglecting the

importance of external networks in driving organisational success (Selvaraja and Pihie, 2017).

Another recurring critique concerns the perceived applicability of entrepreneurial leadership. Some scholars argue that it is primarily relevant to new ventures (Leitch et al., 2013) and profit-oriented organisations (Vecchio, 2003), limiting its utility in non-profit or public-sector contexts. Clark, Harrison and Gibb (2019) call for more empirical research to strengthen the theoretical foundations of entrepreneurial leadership, while Kesidou and Carter (2018) advocate for examining the construct through an organisational behaviour lens. Their findings suggest that entrepreneurial leaders exhibit behavioural traits such as opportunism, risk tolerance, value creation, and innovation, attributes that enable a transition from influence to action.

Measurement Considerations

For the present study, Renko et al.'s (2015) ENTRELEAD scale (depicted in Table 11) is adopted due to its concise structure and focus on follower perceptions of leaders' entrepreneurial qualities. Unlike Thornberry's Entrepreneurial Leadership Questionnaire (ELQ), which comprises 50 items across five dimensions, the ENTRELEAD scale consists of eight items grouped into five factors:

- Innovativeness (e.g., "often comes up with radical improvement ideas for the products/services we are selling"),
- Creativity (e.g., "has creative solutions to problems"),
- Passion (e.g., "demonstrates passion for his/her work"),
- Vision of the Future (e.g., "has a vision of the future of our business"),
- Risk-Taking (e.g., "takes risks") (Ranjan, 2018, p. 107).

Renko et al. (2015) argue that adaptability and risk-taking are critical drivers of innovation, aligning with the theoretical underpinnings of entrepreneurial leadership. This streamlined measurement approach enhances practicality while maintaining conceptual integrity. Moreover, empirical evidence suggests that entrepreneurial leadership fosters sustainable performance by igniting follower enthusiasm and enhancing personal effectiveness (Kwong et al., 2019).

Table 11. ENTRELEAD Scale

1.	Often comes up with radical improvement ideas for the products/services we are selling.
2.	Often comes up with ideas of completely new products/services that we could sell.
3.	Takes risks.
4.	Has creative solutions to problems.
5.	Demonstrates passion for his/her work.
6.	Has a vision of the future of our business.
7.	Challenges and pushes me to act in a more innovative way.
8.	Wants me to challenge the current ways we do business.

Source: Adapted from Renko et al. (2015, p. 74)

Renko et al. (2015) argue that the ENTRELEAD scale effectively captures followers' perceptions of leaders' entrepreneurial competencies, offering a practical and theoretically grounded measure of entrepreneurial leadership. This focus on observable behaviours and follower evaluations enhances its applicability across organisational contexts.

Empirical studies have validated entrepreneurial leadership across diverse cultural and economic settings, including Iran and Scotland (Bagheri and Harrison, 2020), Germany (Hensellek, Kleine-Stegemann and Kollmann, 2023), Australia, Canada, and the UK (Newman et al., 2018), Croatia (Guberina, Wang and Obrenovic, 2023), the US, Serbia, and Bosnia and Herzegovina (Kreiner et al., 2022), China (Cai et al., 2019), and Malaysia (Nor-Aishah, Ahmad and Thurasamy, 2020). Within the Malaysian SME context, entrepreneurial competencies have been shown to significantly influence firm growth (Sajilan and Tehseen, 2015), while dynamic capabilities mediate the relationship between entrepreneurial competencies and performance (Nasuredin, Halipah and Shamsudin, 2016).

Creativity emerges as a critical trait of entrepreneurial leaders. Cai et al. (2019), in a study involving 43 leaders and 237 employees across eight Chinese firms, found a direct relationship between entrepreneurial leadership and team creativity,

reinforcing its role in fostering innovation. Additional research corroborates the positive association between entrepreneurial leadership and innovation (Pinela, Guevara and Armijos, 2022; Li, Makhdoom and Asim, 2020; Newman et al., 2018; Bagheri and Akbari, 2018).

Despite these advances, a significant gap persists in the literature: the relationship between entrepreneurial leadership and authentic leadership remains underexplored. Furthermore, the interplay between these leadership constructs and personal values has not been empirically examined. Addressing this gap is critical for understanding how value-driven leadership behaviours intersect with entrepreneurial competencies, particularly within culturally diverse contexts such as the UK and Malaysia.

Figure 5. ENTRELEAD Scale Items

Entrepreneurial orientation	Creativity supportive behaviour
• Often comes up with radical improvement ideas for the products/services we are selling • Often comes up with ideas of completely new products/services that we could sell • Takes risks • Has creative solutions to problems • Demonstrates passion for his/her work • Has a vision of the future of our business	• Challenges and pushes me to act in a more innovative way • Wants me to challenge the current ways we do business

Source: Adapted from Renko et al. (2015)

The selection of Renko et al.'s (2015) ENTRELEAD model for this study is underpinned by its conceptual integration of three leadership orientations: entrepreneurial orientation, transformational leadership, and creativity-supportive leadership and grouped into two sections; entrepreneurial orientation and creativity support behaviour (Figure 5). This alignment is particularly relevant given millennials demonstrated preference for transformational leadership, as discussed earlier in this review.

A key strength of the model lies in its explicit linkage between entrepreneurship and creativity, conceptualising these as inseparable drivers of organisational innovation. Empirical evidence supports this claim, with Cai et al. (2019) demonstrating that entrepreneurial leadership outperforms transformational leadership in predicting employee creativity. This reinforces the model's suitability for examining leadership behaviours that foster innovation within SMEs, particularly in contexts where adaptability and opportunity exploitation are critical for competitive advantage.

2.5 Culture

The influence of culture on organisational behaviour and leadership remains a contested domain. Kirkman, Lowe and Gibson (2006), in their comprehensive review of Hofstede-related studies, highlight inconsistencies in findings regarding cultural distance and its impact on organisational decision-making. They caution against equating country with culture, advocating for the inclusion of additional cultural dimensions and multi-level analyses such as spanning individual, group, and organisational levels, rather than relying solely on national-level constructs. This position contrasts with Hofstede (2001) and House et al. (2004), who assert that management theories are inherently shaped by national culture. Kirkman, Lowe and Gibson (2016) further recommend future research to explicitly incorporate cultural values at multiple levels to enhance theoretical precision.

Oyserman (2017) conceptualises culture as comprising three interrelated aspects that shape daily experiences:

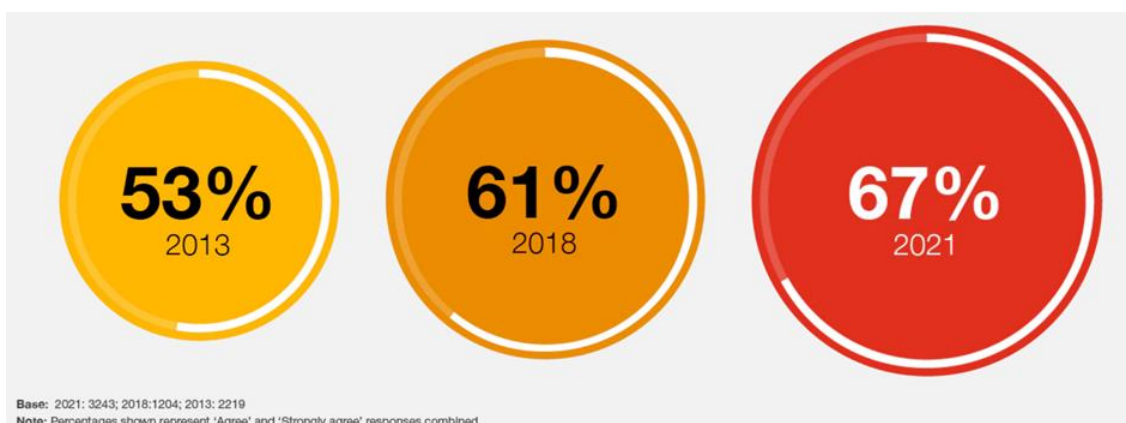
1. Particular Practices – habitual routines that reduce cognitive load by enabling predictability in everyday life.
2. Core Themes – overarching orientations such as individualism, collectivism, or honour, which influence self-concept, norms, and responses to uncertainty. Honour, for instance, reflects a propensity to interpret ambiguous experiences in terms of reputation and social rank (Oyserman, 2017, p. 437).

3. Contextual Variability – the dynamic adaptation of cultural themes in response to situational factors.

Particular practices provide individuals with implicit knowledge of “how things are likely to unfold,” reducing the need for deliberation unless expectations are violated. Core themes, by contrast, shape cognitive processing styles: extreme individualists adopt analytic reasoning, applying universal rules in isolation, whereas collectivists employ holistic reasoning, considering relational and contextual factors. Empirical evidence from Adam et al. (2018), based on six cross-cultural studies, demonstrates that individuals with international experience exhibit heightened self-concept clarity, underscoring the role of cultural exposure in shaping identity.

The organisational relevance of culture is equally pronounced. A global survey by PwC (2021), involving 3,200 employees across 40 countries, revealed that organisational culture is increasingly recognised as a strategic priority by senior leadership (see Figure 6). The report argues that culture can serve as a competitive advantage when aligned with business objectives but may act as an inhibitor when misaligned. Consequently, organisations are urged to critically evaluate whether their cultural attributes function as enablers or barriers to strategic goals.

Figure 6. Organisational Culture



Source: PwC (2021)

The work culture in Malaysia is often characterised by strong collectivist tendencies and familial structures. Saxena and Dasgupta (2017) observe that

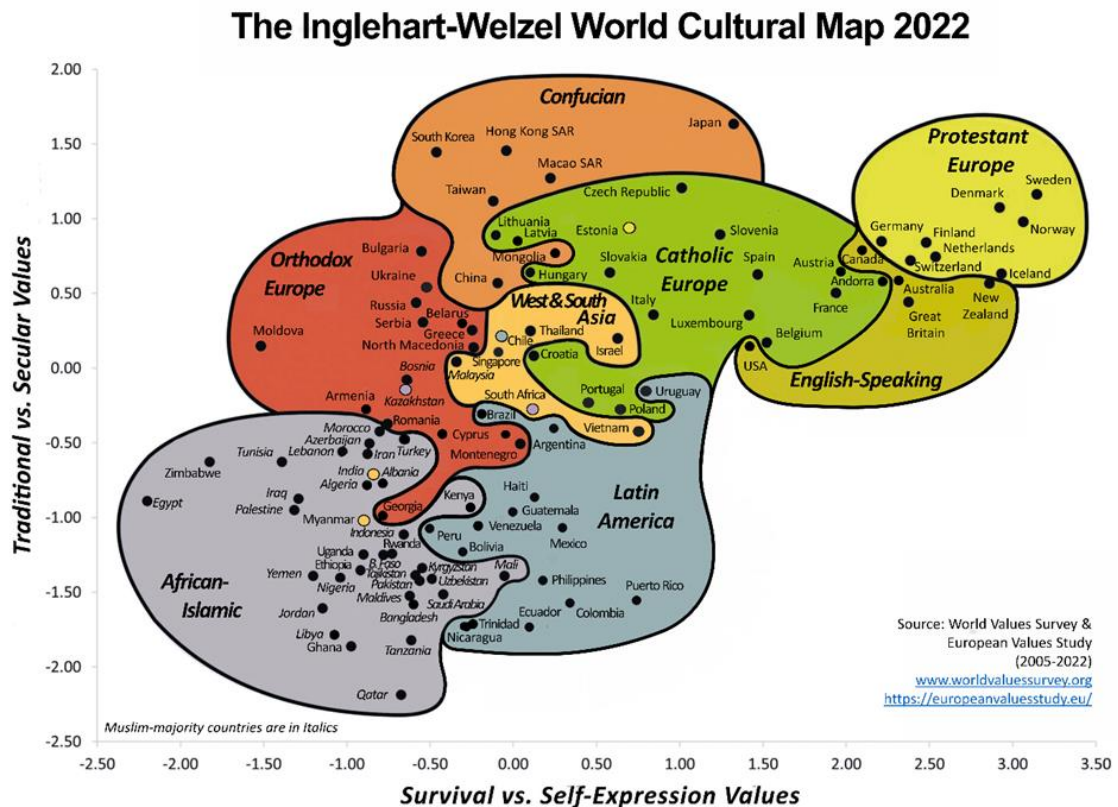
Malaysian organisations frequently resemble family units, with senior figures regarded as elders and employees encouraged to participate in social activities beyond working hours. This familial orientation extends to corporate governance, as evidenced by Shah (2020), who reports that seven of the ten highest-paid board members in 2019 were from family-controlled firms. Tan Li Shan (2016) further notes that over half of the 900 companies listed on Bursa Malaysia are family-owned, underscoring the pervasive influence of family networks in Malaysian business.

Ghazali, Halib and Shamim (2014) reinforce the collectivist nature of Malaysian work culture, highlighting employees' preference for harmonious relationships, consensus-based decision-making, and conflict resolution through negotiation rather than confrontation. Social connections often extend beyond the workplace, with employees maintaining long-term relationships and offering mutual support, particularly within SMEs. SMEs in Malaysia are defined as firms with no more than 75 employees and annual turnover not exceeding RM 20 million in services and other sectors, or 200 employees and RM 50 million in manufacturing (SME Corporation Malaysia, 2021).

Language and ethnicity also shape workplace dynamics, with teams frequently communicating in their native languages, reflecting Malaysia's multicultural composition (Abu Bakar, Mohamad and Mustaffa, 2007). Despite these differences, Malaysian corporate communication practices have been positively associated with job satisfaction (Abu Bakar and Mustaffa, 2013).

In contrast, UK work culture emphasises individualism and formal organisational structures, albeit with increasing attention to work-life balance and employee well-being. Lewis (2001) notes that family-friendly policies have long been embedded in UK employment practices, supported by legislative frameworks. However, contemporary discourse has shifted towards mental health, with a Deloitte (2020) study revealing that one in six UK employees experience mental health challenges; primarily stress, anxiety, and depression, underscoring the growing importance of psychological well-being in organisational agendas.

Figure 7. World Cultural Map



Source: The Inglehart-Welzel World Cultural Map – World Values Survey 7 (2022)

Figure 7 illustrates global patterns of cultural change as they relate to value orientations. Inglehart and Welzel (2005) identify two principal dimensions of cross-cultural variation: (i) traditional versus secular-rational values and (ii) survival versus self-expression values. Traditional values emphasise family cohesion, religious adherence, hierarchical authority, and filial respect, whereas secular-rational values represent a rejection of these norms, assigning them diminished significance. Survival values prioritise economic and physical security, often accompanied by ethnocentric tendencies, while self-expression values foreground environmental protection, tolerance towards immigrants, egalitarianism, and participatory governance.

Religious affiliation constitutes a key criterion for positioning countries within these dimensions. Inglehart and Welzel (2005) argue that Protestant cultures tend to score higher on the survival/self-expression axis compared to Roman Catholic cultures, while Muslim cultures cluster towards the traditional/survival end of the

spectrum. Within this framework, Great Britain is characterised by relatively secular and self-expression-oriented values, contrasting with Malaysia's orientation towards survival values.

The significance of values extends across individual and societal levels, albeit with varying degrees of salience. Schwartz (2006) delineates six defining features of values: they resemble beliefs; they denote desirable goals; they transcend specific actions and contexts; they function as evaluative standards; they are hierarchically ordered; and their relative importance influences behaviour. Further discussion of personal values is provided in Section 2.6.

2.5.1 Cultural Differences in Leadership Styles

Cross-cultural leadership research is predicated on the assumption that leadership styles vary across national contexts. Empirical studies have examined these differences in diverse cultural settings. Takeuchi, Wang and Farh (2020) provide evidence that Asian leadership perceptions are shaped by high power distance, aligning with paternalistic leadership theory, whereas Western leadership is grounded in social exchange principles. Similarly, Miyamoto and Wilken (2011), in a comparative study of American and Japanese undergraduates, found that influence strategies differ: Americans adopt an analytic perceptual style focused on individual goals, while Japanese participants employ a holistic approach, prioritising relational adjustment.

Leadership theories also yield differential outcomes across cultures.

Transformational leadership has been associated with heightened organisational commitment in collectivist contexts (Jackson, Meyer and Wang, 2013). Hussain, Ismail and Javed (2017) corroborate these findings in Pakistan, noting positive subordinate outcomes under transformational leadership, but adverse effects under transactional leadership, particularly its punitive dimension. Dwairy (2019) argues that cultural dynamics shape leadership in complex, often implicit ways, necessitating sensitivity to internal and external cultural interactions.

Methodological limitations persist, as many prior studies rely on student samples

(Klasmeier and Rowold, 2020), creating scope for research involving practising millennial leaders.

Alternative perspectives advocate integrating indigenous philosophies into leadership theory. Bai and Roberts (2011) propose Taoism as a meta-framework for Western leadership models, conceptualising leadership through Yin-Yang dualities—leader-follower, internal-external, and contextual interplay. Similarly, Dhamija et al. (2023) draw on Hindu philosophy, particularly the Bhagavad Gita, to promote transcendental thinking as a basis for ethical decision-making and duty fulfilment. Empirical evidence also suggests cultural contingencies in leadership effectiveness: in Turkey, paternalistic and empowering leadership fostered organisational citizenship behaviours, whereas in the Netherlands, empowering leadership proved more effective (Ersoy et al., 2012). Bird et al. (2010) emphasise global leadership competencies such as tolerance for ambiguity, emotional resilience, and optimism.

The debate over cultural specificity versus universality in leadership remains unresolved. While some scholars argue for culturally contingent leadership (House et al., 2004; Dorfman et al., 2012), others posit that leadership principles can transcend cultural boundaries (Lee, Scandura and Sharif, 2014). Singh and Xiuxi (2023) caution against homogenising Asia, advocating for nuanced distinctions between ASEAN nations, North Asia, and South Asia. Yie (2021) critiques assumptions of cultural neutrality in Western leadership models, highlighting the role of power distance in shaping leadership dynamics (Takeuchi, Wang and Farh, 2020). The GLOBE project (House et al., 2004), the most extensive cross-cultural leadership study to date, and subsequent contributions such as Dorfman et al.'s (2012) culturally endorsed leadership theory (CLT), underscore the predictive role of cultural values in leadership dimensions (see Table 12).

Table 12. Cultural Values and Leadership Dimensions

Cultural dimension (values)	Charismatic/value based	Participative	Self-protective	Human oriented	Team oriented	Autonomous
Performance orientation	++	++	-	+	+	++
Humane orientation	+	++		++	+	--
Uncertainty avoidance		--	++	++	++	
In-group collectivism	++		-		++	
Power distance	--	--	++			
Gender egalitarianism	++	++	--			
Future orientation	+			+	+	
Assertiveness		-		++		
Institutional collectivism						--

Source: Dorfman et al. (2012, p. 507)

Note: “+” indicates a positive relationship- between the culture dimension and CLT; “++” indicates strong positive relationship between the culture dimension and CLT; “-“ indicates a negative relationship between the culture dimension and CLT; “- -“ indicates a strong negative relationship between the culture dimension and CLT.

Confirmatory factor analysis (CFA) is widely employed in cross-cultural research as a measurement model due to its capacity to test the theoretical structure underlying specific instruments (Fischer and Karl, 2019). However, Fischer and Karl caution that CFA models are often rejected when applied to large samples. To address this, they propose two strategies: (i) adopting incremental models that compare fit indices against alternative models, and (ii) utilising lack-of-fit indices, where lower values indicate improved model fit. For instance, a smaller standardised root mean square residual (SRMR) suggests minimal deviation. The authors advocate for a judicious selection of fit indices, recommending alternatives such as McDonald’s Non-Centrality Index. Thomas et al. (2015) extend this discussion by incorporating the non-normed fit index (NNFI), although their findings indicate SRMR remains a robust indicator of model fit.

Buil, de Chernatony and Martínez (2012) recommend multigroup CFA to assess measurement equivalence or invariance across conditions, particularly when reflective indicators represent latent constructs. Conversely, Acar (2021) reports an absence of metric differences in invariance testing, interpreting this as evidence of instrument suitability for the target population. Leitgöb et al. (2023) critique absolute invariance assumptions—where differences are presumed to be zero—arguing that such rigidity can compromise model fit in culturally diverse samples. They advocate for configural models as a pragmatic alternative, while acknowledging limitations in comparing latent factor means. Furthermore, they emphasise pre-survey considerations such as scale design, pretesting, and translation protocols to enhance validity.

The present study aims to examine leadership across contrasting cultural contexts, focusing on communication styles and their perceived effectiveness. For example, indirect communication that preserves group harmony is valued in Asian settings (Chun et al., 2009), whereas Western cultures favour direct, task-oriented exchanges. Given the predominance of North American management theory,

paternalistic leadership warrants reconsideration, particularly considering evidence supporting humane-oriented leadership in Southern Asia, contrasted with its diminished relevance in Nordic Europe (Mittel and Dorfman, 2012). Despite extensive research, consensus on effective leader behaviour remains elusive, underscoring the need for further inquiry.

Malaysia and the UK were selected for this study due to their divergent cultural profiles: Malaysia exemplifies collectivism and high power distance, whereas the UK reflects individualism and relatively low power distance (Ahmed, Mouratidis and Preston, 2008; Rahman, 2019).

2.6 Personal Values

Personal values represent a broad construct encompassing stability and aspirational ideals that shape human existence (Schwartz, 1992, cited in Arieli, Sagiv and Roccas, 2018). As motivational drivers, values influence behaviour by guiding individuals towards actions that facilitate goal attainment (Arieli, Sagiv and Roccas, 2018). These values are enduring across contexts and time, hierarchically ordered by importance, and serve as evaluative standards for decision-making.

The conceptual origins of values are attributed to Eduard Spranger, who defined them as a composite of perceptions, beliefs, attitudes, rational and irrational judgments, and associations that frame one's worldview (Santos, Santos and Silva, 2018). Spranger proposed six value orientations—*aesthetic, economic, religious, political, social, and theoretical* (Kopelman, Rovenpor and Guan, 2003). In contrast, work values refer to preferences for job characteristics and rewards, encompassing dimensions such as *extrinsic (pay, promotion), intrinsic (learning opportunities), autonomy, social relationships, and stimulation* (Lechner et al., 2018). Kuron et al. (2014) highlight a paucity of research on millennials' work values during the transition from education to employment.

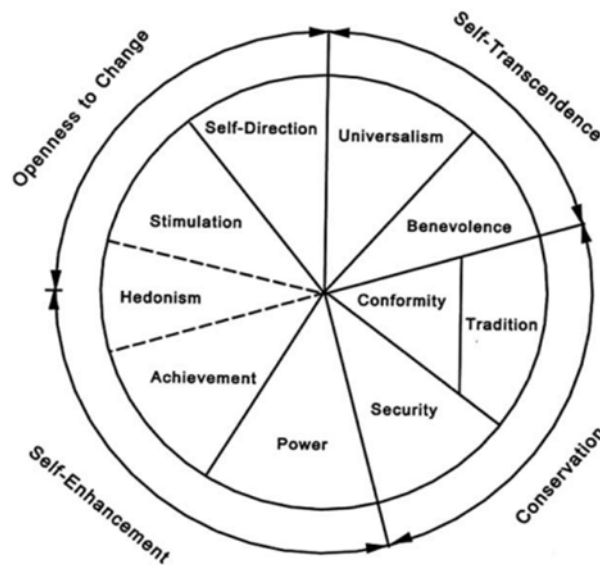
Empirical evidence demonstrates cultural variability in value orientations (Pozzebon and Ashton, 2009; Schwartz and Rubel, 2005). Boer and Fischer (2013), in a study of 30,357 participants across 31 countries, found that personal values strongly correlate with social attitudes in individualistic cultures, whereas

collectivist societies prioritise conservation values underpinning moral codes and social regulation. Generational studies further reveal continuity and divergence in leadership-related values. Ahn and Ettner (2014), examining American executives and MBA students, observed that core values such as integrity and trust persist across generations, while others vary. Weber (2017) supports this, noting millennials share foundational values with older managers but emphasise competence over ethical or social dimensions. Conversely, Twenge, Campbell and Freeman (2012) report declining millennial commitment to empathy, environmentalism, and altruism.

Personal values are increasingly recognised as precursors to leadership effectiveness (Lichtenstein, Aitken and Parry, 2015), though their role remains underexplored (Watton, Lichtenstein and Aitken, 2019). Prior research links values to organisational culture formation (Gao, 2015) and competitive advantage (Pfeffer, 2002). Prada-Ospina, Zarate-Torres and Rey (2020) found Colombian leaders prioritise honesty, spirituality, and achievement over wealth and prestige. While Schwartz (2012) posits that values transcend context, Seligman (2013) disputes this, arguing situational variability. Rokeach (1973) introduced a dual typology, terminal (moral) and instrumental (competence-based) values, categorised into personal and social orientations, with instrumental values (e.g., politeness, ambition) driving goal-directed behaviour (Kim, 2020; Kautish and Sharma, 2021).

Building on this, Sagiv and Schwartz (2022) propose ten universal value types: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security. These dimensions collectively capture authority, success, pleasure, novelty, autonomy, tolerance, altruism, cultural adherence, social norms, and stability, offering a comprehensive framework for cross-cultural value analysis.

Figure 8. Schwartz Circle of Value Regions



Source: Borg, Bardi and Schwartz (2017, p. 152)

Schwartz's (1992) value theory organises the ten basic value types into four higher-order dimensions based on their underlying motivational goals: (a) self-enhancement, (b) openness to change, (c) self-transcendence, and (d) conservation. The first two dimensions primarily reflect personal interests, whereas the latter two align with social interests. Schwartz emphasises that these values are subject to practical and psychological conflicts, which manifest in perceptions, preferences, and behaviours (Borg, Bardi and Schwartz, 2017). Hedonism occupies an intermediate position, incorporating elements of both openness to change and self-enhancement (Schwartz, 2009). Characteristically, self-transcendence prioritises the welfare of others; self-enhancement focuses on self-interest; conservation reflects a preference for maintaining the status quo; and openness to change denotes intellectual and emotional autonomy.

Empirical research illustrates the cultural relevance of these dimensions. Thien et al. (2023), examining Malaysian leaders, found significant associations between servant leadership and values of compassion and forgiveness, underscoring the call for culturally distinct leadership research. In contrast, UK-based studies linking values to leadership remain limited, with most focusing on policing contexts (Yarlagadda et al., 2017), signalling opportunities for further investigation.

Sagiv and Schwartz (2022) extend the discourse by exploring value relationships, highlighting conflicts and compatibilities. For instance, achievement values often clash with benevolence, as striving for personal success contradicts concern for others' welfare. Similarly, tradition values conflict with stimulation, given the tension between cultural adherence and novelty-seeking. Conversely, benevolence aligns with conformity, and security complements power. These relationships, illustrated in Figure 8, position openness to change in opposition to conservation and self-transcendence against self-enhancement. Compatible values guide preferences and behaviours, whereas conflicting values constrain or preclude simultaneous pursuit (Sagiv and Schwartz, 2022). Sverdlik (2012) supports this, noting individuals typically prioritise one value over its opposing counterpart when faced with conflict.

Generational analyses reveal contested perspectives on millennial value orientations. Arsenault (2004) associates millennials with honesty, competence, and loyalty, while Cavagnaro, Staffieri and Postma (2018) argue for variability across countries, suggesting a tendency towards universalism and self-transcendence. Lyons (2003) contrasts this with evidence of self-interest in work values relative to previous generations' self-sacrificing ethos. Twenge, Campbell and Freeman (2012) report declining millennial engagement with empathy, civic duty, and environmental concerns, corroborated by findings of heightened narcissism and personal gratification (Westerman et al., 2012). Weber (2017) observes a preference for competence-based values over social or ethical ones. Conversely, Carmichael (2016) and Johnson (2015) identify millennials as sharing traditional work values while exhibiting complex, sometimes conflicting priorities. Johnson further notes aspirations for societal impact and alignment with socially responsible organisations. Supporting this, Črešnar and Jevšenak (2019) found Slovenian millennials emphasise personal growth, self-transcendence, and openness to change).

Administering personal values instruments presents methodological challenges. Schwartz and Boehnke (2004) report reduced effectiveness among adult respondents with lower educational attainment. Empirical studies also reveal

variability in value stability under situational stressors. Daniel et al. (2022) found inconsistent effects on altruistic values following threatening encounters, with outcomes ranging from increases to decreases or no change. Temporal patterns of value reinstatement were similarly mixed, occurring immediately, within eleven days, or up to five months post-terrorist attack. Their findings further indicate heightened conservation values during the COVID-19 pandemic, accompanied by a decline in self-transcendence towards its conclusion.

Despite such fluctuations, Sagiv and Schwartz (2022) maintain that values are trans-situational, remaining consistent across social, professional, and personal contexts—a position supported by de Wet, Wetzelhutter and Bacher (2019). Kilbourne, Grünhagen and Foley (2005) link Hofstede's cultural dimensions to Schwartz's higher-order value categories: power distance aligns with self-transcendence, individualism with self-enhancement, and uncertainty avoidance with tradition/openness. Schwartz's (2007) comparative study of 20 European nations found age-related differences: older cohorts prioritised self-transcendence and conservation, whereas younger respondents emphasised self-enhancement and openness to change.

Sagiv and Schwartz's framework underpins the present study, given its empirical validation across approximately 100 countries (Sagiv and Schwartz, 2020) and its prominence in explaining individual behaviour and organisational dynamics (Weber et al., 2019; Arieli, Sagiv and Roccas, 2020). Prior research consistently demonstrates a direct relationship between personal values and leadership (Sosik, 2005; Dean, 2008; Bruno and Lay, 2008; Gao, 2015; Castillo, Adell and Alvarez, 2018; Črešnar and Nedelko, 2020). Chang and Lin (2008), examining Taiwanese leaders with and without Anglo cultural exposure, observed that foreign cultural experience moderates the correlation between leadership behaviour and dominant values, rendering leadership patterns more complex among globally exposed leaders. These findings suggest cultural experience can reshape personal values and leadership approaches.

Building on this evidence, the current study proposes three hypotheses:

- **H1:** Millennial leaders' personal values will positively influence authentic leadership styles in both UK and Malaysian samples. This hypothesis tests whether personal values correlate with authentic leadership across culturally distinct contexts.
- **H2:** Millennial leaders' personal values will positively influence entrepreneurial leadership styles in both UK and Malaysian samples. This examines whether entrepreneurial leadership is similarly value-driven across the two national cohorts.
- **H3:** Differences in millennial leaders' personal values will significantly affect UK and Malaysian samples. This hypothesis explores whether value incompatibilities or contrasts exist between the two groups, identifying which values diverge and the extent of these differences.

2.7 Generation Y

Research on Generation Y (Millennials) often portrays them through stereotypical attributes such as narcissism, overconfidence, entitlement, and laziness, alongside behaviours like frequent self-photography and online self-promotion (Twenge et al., 2008; Stein, 2013). Westerman et al. (2012) corroborate these claims, noting higher narcissism among business students compared to psychology students. Ramayah et al. (2017) conceptualise millennial narcissism across three dimensions: leadership/authority, grandiose exhibitionism, and entitlement/exploitation. These traits are linked to expectations of rewards irrespective of performance (Rani and Samuel, 2016) and demands for rapid career progression and skill acquisition (Hg, Schweitzer and Lyons, 2010), reinforcing generational stereotypes that influence leadership discourse. However, Susaeta et al. (2013) caution that generational characteristics are culturally contingent, shaped by national contexts.

Salahuddin (2010) theorises distinct work ethics across generations. Baby Boomers (1946–1964) exhibit collaborative, service-oriented behaviours and strong relational skills but struggle with conflict and display judgmental

tendencies. Generation X (1961–1981) is characterised by adaptability, autonomy, and innovation, yet criticised for impatience, cynicism, and poor interpersonal skills (O'Bannon, 2001). These contrasts raise questions about the alignment of leadership styles with generational expectations. Rudolph, Rauvola and Zacher (2018) challenge the validity of generational difference theories, citing flawed assumptions, methodological limitations, and insufficient empirical evidence. Supporting this critique, Wilson et al. (2008) found no significant differences in job satisfaction between Generation X and Y among nursing professionals.

Despite these debates, some studies suggest millennials favour transformational leadership (Afsar, Badir and Bin Saeed, 2014; Uusi-Kakkuri, Brandt and Kultalahti, 2016), valuing inclusivity and immediate feedback (Lowe, Levitt and Wilson, 2008). Yet, transformational leadership may not be universally applicable; Ergeneli, Gohar and Temirbekova (2007) argue its cultural specificity to Western contexts. Chen et al. (2014) advocate examining leadership styles through cultural roots and psychological mechanisms, demonstrating that paternalistic leadership enhances follower performance via affective trust derived from benevolence and morality—a finding echoed in Indonesian (A'yunnisa et al., 2020) and Chinese contexts (Ling, Chia and Fang, 2000).

Seldon (2014) identifies eight themes for millennial leadership development, including expectations for effective communication, emotional safety, engagement, and technology integration. Nye (2017) observes millennials' confidence in leadership potential despite limited experience, while Omilion-Hodges and Sugg (2019) highlight their preference for communicative, relationship-oriented leadership. Deloitte (2022) reports that 36% of millennials have declined roles due to misalignment with personal values, rising to 46% among senior millennials. Folarin (2021) characterises millennial leaders as collaborative, experimental, and nomadic, contributing to organisational change through inclusive practices and advocacy for equality.

However, the literature remains Western-centric. Galdames and Guihen's (2020) systematic review reveal that 85% of studies on millennials and leadership

originate from the United States, with only 14.8% focusing on millennials as leaders rather than followers. This gap underscores the need for research on millennial leadership in non-Western contexts. Incorporating perspectives from collectivist societies such as Malaysia alongside individualistic contexts like the UK offers valuable insights for the present study.

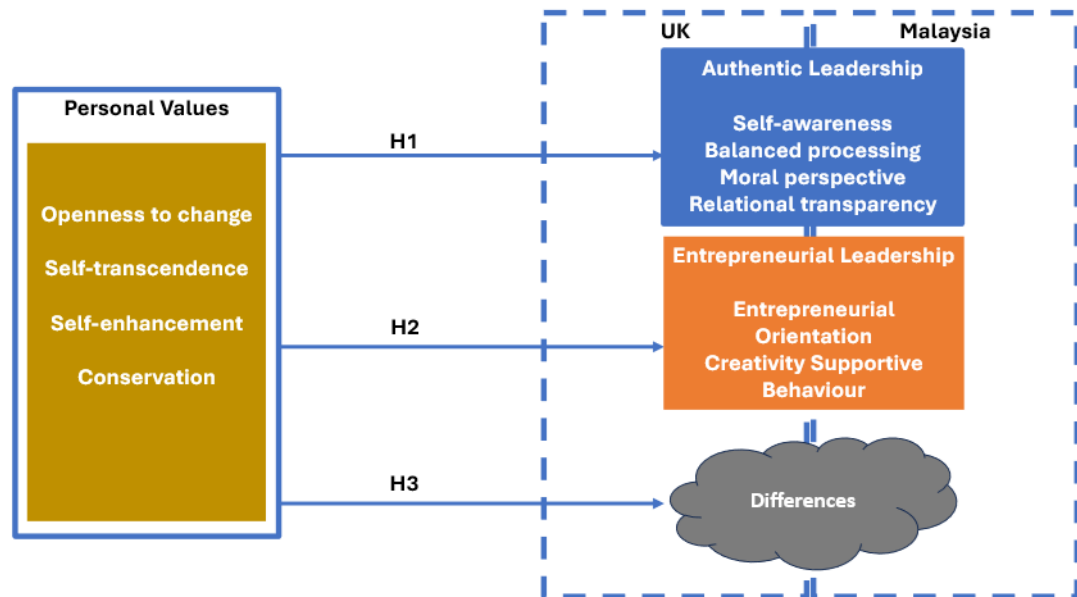
2.8 Theoretical Framework

A theoretical framework provides a structured lens for interpreting the theories underpinning a study and clarifying relationships among selected variables. Kivunja (2018) conceptualises such frameworks as synthesised contributions from foundational theorists, integrated with the researcher's interpretation to guide data analysis and theoretical application.

In line with the study's scope, a theoretical framework is proposed (see Figure 9), incorporating themes aligned with Generation Y's leadership tendencies. The selection is informed by three key considerations: (i) Millennials exhibit greater valuation of superiors compared to previous cohorts (Twenge et al., 2010); (ii) they demonstrate distinct work values and are inclined to exit employment when needs remain unmet (Lu and Gursoy, 2013); and (iii) the necessity for revisiting leadership theories to accommodate generational shifts.

This research contributes to understanding leadership among authentic and entrepreneurial millennial leaders across two culturally divergent contexts, the UK and Malaysia. By examining the relevance of personal values within these cohorts, the study offers practical implications for organisations seeking to identify value-based leadership attributes as prerequisites for talent development and succession planning.

Figure 9. Theoretical Framework



Source: Developed by the researcher

The proposed framework (Figure 9) integrates three core leadership discourses—authentic leadership, entrepreneurial leadership, and personal values. Attributes for each construct are drawn from established sources: Walumbwa et al. (2008) for authentic leadership, Renko et al. (2015) for entrepreneurial leadership, and Schwartz (1992) for personal values. An adapted authentic entrepreneurial leadership model from Jensen and Luthans (2006) provides a conceptual basis for examining the influence of millennial leaders within small and medium-sized enterprises (SMEs).

Personal values are central to this framework, reflecting evidence that generational behaviour is shaped by cultural context and national identity (Muduli, 2011; Susaeta et al., 2013), and that leadership styles are mediated by cultural roots and psychological mechanisms (Chen et al., 2014). Values also exert a direct influence on leadership behaviour and organisational climate (Cha and Edmondson, 2006). Figure 9 operationalises these relationships, enabling evaluation of which value dimensions underpin leadership among millennials in the UK and Malaysia.

The selection of these two countries is informed by Hofstede's power distance index (PDI), which contrasts markedly between the UK (35) and Malaysia (100) (Hofstede Insights, 2017). Despite Hofstede's original study dating to the 1970s, its relevance persists, as evidenced by its continued application in contemporary research (Lyulyov et al., 2023; Ding and Wang, 2023; Garcia et al., 2023) and its foundational role in subsequent cross-cultural frameworks, including Schwartz's value theory (Adamovic, 2023). Cultural differences remain a critical determinant in international business and leadership studies (Tung and Stahl, 2018).

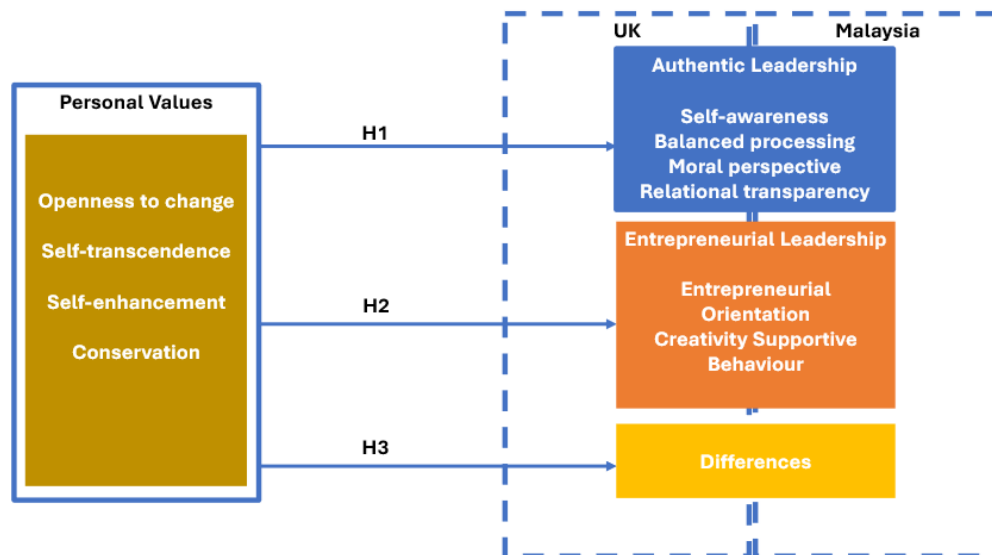
Authentic leadership is associated with follower engagement and organisational commitment, particularly when leaders provide support, recognition, and developmental opportunities (Harter, Schmidt and Hayes, 2002). Millennials appear to benefit from such relational and supportive leadership approaches (Seldon, 2014). Entrepreneurial leadership is equally pertinent given the study's focus on millennial leaders within SMEs, offering a lens to assess innovation-driven leadership effectiveness across cultural contexts (Gupta, MacMillan and Surie, 2004).

The framework incorporates three hypotheses: (H1) personal values influence authentic leadership styles among millennial leaders in both countries; (H2) personal values influence entrepreneurial leadership styles; and (H3) differences in personal values exist between UK and Malaysian millennial leaders. These hypotheses aim to clarify whether value-based leadership relationships are culturally contingent or generalisable.

Figure 9 delineates four higher-order value categories (Sagiv and Schwartz, 2022): openness to change (self-direction, stimulation, hedonism), self-transcendence (universalism, benevolence), self-enhancement (power, achievement, hedonism), and conservation (security, conformity, tradition). Authentic leadership attributes i.e. self-awareness, balanced processing, internalised moral perspective, and relational transparency are positioned within the blue section (Avolio and Gardner, 2005; Gardner et al., 2005; Northouse, 2013). Entrepreneurial leadership, represented in orange, comprises innovativeness, creativity, passion, vision, and

risk-taking (Renko et al., 2015). The grey section anticipates potential differences in value-leadership linkages between the two cultural contexts, an area where prior research offers limited guidance. These relationships are further explored in Figure 10.

Figure 10. Preponderant Values Leadership Model



Source: Developed by the researcher

Figure 10 introduces the Preponderant Values Leadership (PVL) model, a conceptual framework designed to identify differences in personal values among authentic entrepreneurial millennial leaders across two culturally distinct contexts, the UK and Malaysia. The model draws on Schwartz's (1992) value theory, which categorises ten basic values into four higher-order dimensions: openness to change, self-transcendence, self-enhancement, and conservation (Sagiv and Schwartz, 2022). Hedonism occupies an intermediate position, bridging openness to change and self-enhancement. Values are hierarchically structured and vary in importance across individuals (Arieli, Sagiv and Roccas, 2020; Schwartz et al., 2001). These dimensions form two bipolar axes: openness to change versus conservation, and self-transcendence versus self-enhancement (Prada-Ospina, Zarate-Torres and Rey, 2020). Openness to change reflects autonomy and novelty-seeking (self-direction, stimulation), contrasting with

conservation's emphasis on tradition, conformity, and security. Self-enhancement prioritises power and achievement, conflicting with self-transcendence values of benevolence and universalism.

Authentic leadership, operationalised through four components; self-awareness, balanced processing, internalised moral perspective, and relational transparency, derives from Walumbwa et al.'s (2008) framework and Avolio et al.'s (2004) emphasis on positive leadership psychology. SMEs provide an ideal context for authentic leadership due to their relatively simple structures and founder-driven influence (Jensen and Luthans, 2006). Entrepreneurial leadership complements this focus, characterised by innovativeness, creativity, passion, vision, and risk-taking (Renko et al., 2015), with self-efficacy identified as a critical antecedent (Walumbwa et al., 2005).

The PVL model operationalises these constructs through survey instruments measuring ten personal values, four authentic leadership factors, and five entrepreneurial leadership elements. Respondents (leaders and followers) select values and behaviours perceived as antecedents to authentic and entrepreneurial leadership. This enables empirical testing of theorised relationships, such as linking self-transcendence (altruism) to moral perspective and relational transparency, or associating self-enhancement (achievement, status) with self-awareness and visionary behaviour. Openness to change may correlate with balanced processing and entrepreneurial attributes like innovation and risk-taking.

A key contribution of PVL lies in its comparative dimension, addressing an underexplored gap in cross-cultural leadership research. Prior studies have not examined whether personal value differences exist between UK and Malaysian millennial leaders. Preliminary findings suggest divergence from Hofstede's cultural predictions, as Malaysian leaders' personal values do not fully align with national cultural norms. This discrepancy offers theoretical and practical implications, enabling organisations to refine leadership development strategies and adapt policies to generational and cultural nuances. Further details on these differences are presented in the Findings section.

2.9 Conclusion

This section synthesises key literature on millennial leadership, highlighting theoretical perspectives and empirical findings. Transactional and transformational leadership have been associated with younger leaders, reflecting their ethical orientation and emphasis on diversity. Collaborative or shared leadership approaches, which foster group culture and employee engagement, align well with millennials' predisposition towards teamwork. Similarly, situational leadership has gained traction among millennials, who perceive it as more adaptable than approaches favoured by Generation X, thereby enhancing engagement. Paternalistic leadership remains culturally salient in Asian contexts, including Malaysia, where millennials accept its benevolent and moral dimensions but reject authoritarianism. Authentic leadership, widely regarded as foundational to other paradigms such as charismatic, transformational, servant, spiritual, and ethical, also resonates with millennials. Entrepreneurial leadership, characterised by innovation and risk-taking, reflects millennial tendencies towards creativity and adaptability, reinforcing its relevance to this cohort.

While each leadership theory presents limitations, authentic and entrepreneurial leadership were selected for this study due to their conceptual fit with millennial characteristics and organisational contexts. Authentic leadership is operationalised using Walumbwa et al.'s (2008) 16-item ALQ, encompassing self-awareness, balanced processing, moral perspective, and relational transparency. Entrepreneurial leadership draws on Renko et al.'s (2015) five dimensions: innovativeness, creativity, passion, vision, and risk-taking.

Personal values constitute the second key variable, given their established influence on leadership behaviour and organisational culture. Evidence suggests generational similarities in value orientations, though cultural context moderates these relationships, with individualistic societies favouring self-enhancement and collectivist cultures prioritising conservation and self-transcendence (Sagiv and Schwartz, 2022). The study adopts Schwartz's ten-value typology (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence,

tradition, conformity, and security) integrated within the theoretical framework alongside authentic and entrepreneurial leadership.

The introduction of the Preponderant Values Leadership (PVL) model represents a novel contribution, enabling analysis of value–leadership linkages across two culturally divergent millennial cohorts. Country selection is informed by Hofstede’s dimensions of power distance and individualism/collectivism, though preliminary findings challenge Hofstede’s assumptions, revealing discrepancies between national culture and personal values among Malaysian leaders. This divergence underscores the need for generationally focused, context-sensitive leadership research.

The literature review establishes a robust foundation for methodological design, guiding the formulation of research questions and hypotheses. It addresses identified gaps, notably the paucity of studies linking millennials’ personal values to authentic and entrepreneurial leadership across contrasting cultural settings. By situating the study within these theoretical and empirical debates, the review facilitates meaningful contributions to leadership scholarship and informs organisational practice in talent development and cross-cultural management.

Chapter 3: Methodology

3.1 Introduction

The purpose of this quantitative study is to examine the relationships between personal values and the authentic and entrepreneurial leadership approaches of millennial leaders across two culturally distinct contexts, the UK and Malaysia, at a time when this generation is increasingly prominent in the global workforce.

Establishing the philosophical stance underpinning the research is essential for framing its methodological orientation. Accordingly, three dominant paradigms, positivism, interpretivism, and pragmatism, are critically reviewed to justify the chosen epistemological and ontological position. This discussion informs the subsequent research approach, design, and analytical strategy adopted for the study.

3.2 Research Philosophy

Philosophical considerations underpinning research design warrant explicit discussion, as they shape methodological choices and interpretive frameworks. Researchers must clarify ontological and epistemological assumptions, which may be influenced by personal perspectives and values. Proctor (1998) frames these issues through three interrelated questions: What is the nature of reality? (ontology), What can be known? (epistemology), and How can knowledge be discovered? (methodology).

Easterby-Smith, Thorpe and Lowe (2004) emphasise the significance of philosophical awareness for three reasons: (i) it supports the refinement and selection of appropriate research methods, ensuring transparency in the overall strategy; (ii) it enables critical evaluation of methodological options, mitigating risks of misapplication; and (iii) it fosters innovation in adapting research techniques. The process by which research is conducted profoundly influences the validity of conclusions, necessitating alignment between philosophical stance and methodological design.

Three dominant paradigms, positivism, interpretivism, and pragmatism, inform research strategies and methods (Collis and Hussey, 2009), each offering distinct ontological, epistemological, and methodological orientations (Kaushik and Walsh, 2019). Positivism, rooted in Auguste Comte's philosophy, privileges observation and reason as pathways to understanding social reality (Cohen and Maldonado, 2007). It asserts that true knowledge derives from sensory experience and empirical verification, favouring quantitative approaches such as surveys and experiments. Popper (1963) reinforces this stance, advocating methodological choices grounded in observable facts. Positivism is characterised by rationality, scientific deduction, and objectivity (Åge, 2011), with truth conceived as empirically verifiable rather than subjective conviction (Crossan, 2003).

Green and Thorogood (2018) summarise positivism's epistemological premise as broadly realist, assuming a stable and knowable reality independent of human interpretation. Bryman (2016) identifies its defining features as phenomenalism, deductivism, objectivity, and inductivism, while Kolakowski (2004) interprets phenomenalism as collapsing distinctions between essence and phenomenon. Schutz (1972) critiques this stance, arguing that social reality is inherently meaningful to actors and must be understood through constructs grounded in lived experience, contrasting the natural sciences' detached observation with the interpretive complexity of social inquiry. A summary is provided in Table 13.

Table 13. Positivism Ontology and Epistemology

Ontological Assumptions	Epistemological Assumptions
Reality is external to the researcher and represented by objects in space.	The methodology of the natural sciences should be employed to study social reality. Truth can be attained because knowledge rests on a set of firm, unquestionable, indisputable truths from which our beliefs may be deduced.
Objects have meaning independently of any consciousness of them.	Knowledge is generated deductively from a theory or hypothesis.
Reality can be captured by our senses and predicted.	Knowledge is objective.

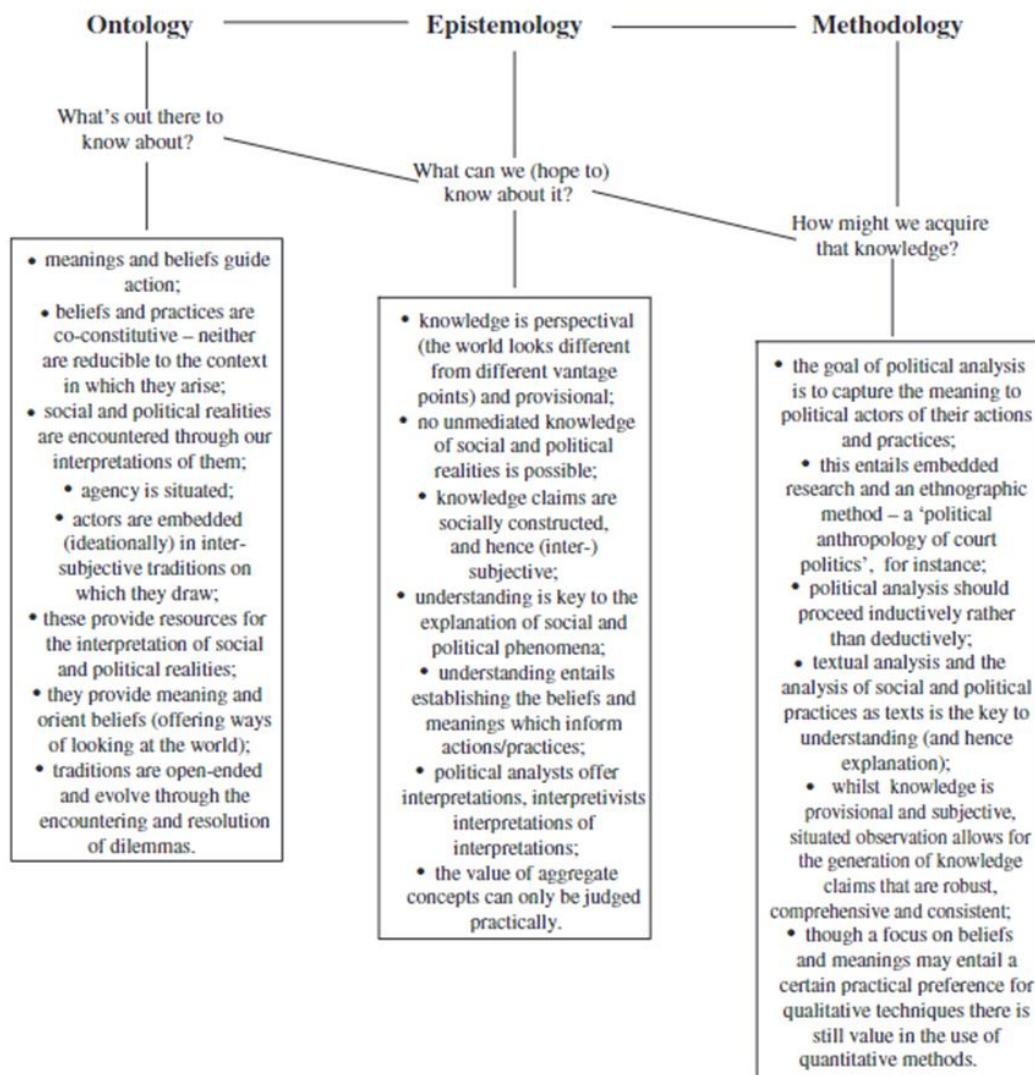
Source: Adapted from Mack (2010)

The positivist assumption that observed or unobserved phenomena constitute expressions of reality is contested; rather, observations should be validated through empirical experience. Deductivism reflects a realist ontology, positing reality as objectively defined facts (Henwood and Pidgeon, 1993), making it well-suited for hypothesis formulation, variable identification, and theoretical testing (Ali and Birley, 1999). Objectivity denotes value-free scientific inquiry, while inductivism refers to deriving general laws from accumulated empirical facts (Bryman, 2016).

Critiques of positivism question its applicability to social science. Mack (2010) argues that objectivity is unattainable, even under rigorous scientific protocols, and challenges the positivist ideal of simplicity, given the complexity of social phenomena. Popper (2002) further asserts that absolute truths are illusory; scientific theories cannot be conclusively verified, only falsified. Bettis and Gregson (2001) highlight positivism's assumption that knowledge is detached from social context and attainable solely through scientific method, a stance increasingly viewed as reductionist.

Interpretivism offers an alternative paradigm, emphasising the subjective meanings individuals ascribe to their social world. It assumes that situating people within their social context enhances understanding of their perceptions and actions (Hussey and Hussey, 1997). Interpretivism seeks insight through meaning-making, adopting a subjectivist epistemology and relativist ontology (Saunders, Lewis and Thornhill, 2012). Bryman (2016) underscores its divergence from natural science, advocating approaches tailored to human social behaviour rather than universal laws. This perspective assumes that humans and their knowledge are inseparable, privileging intersubjectivity and contextual interpretation over detached observation.

Figure 11. Analytical Approach of Interpretivism



Source: Hay (2011, p. 169)

To fully appreciate interpretivism’s social perspective, it is essential to consider Weber’s concept of *Verstehen*, a German term meaning to understand, perceive, and comprehend the significance of social phenomena (Elwell, 1996). Weber’s interpretative sociology positions individual action as the fundamental unit of analysis, reducing complex interactions to ‘understandable’ actions (Tucker, 1965). Crucially, Weber’s focus was not on internal psychological drives but on the subjective meaning individuals attribute to their actions (Herva, 1988). Once these meanings are understood, researchers can engage empathetically with participants, enabling what Bourgeois (1976) describes as ‘validating explanations’, an interpretive approach that recognises and contextualises social data.

Table 14. Differences between Positivism and Interpretivism

Positivism	Interpretivism
Causation – seeks to understand the causal explanation for a phenomenon or event	Interpretation – seeks to understand how people interpret a phenomenon or event
Objective reality – presumes the “existence of facts”	Subjective reality – recognizes the “construction of facts”; facts are seen as interpreted and subjective
Generality – analysis seeks a “law” that extends beyond specific instances studied	Specificity – analysis is context specific and based only on the subjective understanding of individuals within a specific context
Replicability – analyses can be tested and verified empirically against other cases	Self-validation – analyses can only be self-validating, through the consistency and coherence of “thick description”

Source: Roth and Mehta (2002, p. 136)

Table 14 contrasts positivism and interpretivism, highlighting their divergent epistemological orientations. Interpretivism, as Roth and Mehta (2002) argue, illuminates social meanings shaped by cultural beliefs, whereas positivism prioritises identifying causal principles to explain observable phenomena. Despite its strengths, interpretivism faces notable limitations: lack of scientific verification, restricted generalisability, and a subjective ontological stance that overlooks political and ideological influences on knowledge (Mack, 2010). Critics further contend that interpretivism's perceived radical rejection of objective social reality and its failure to establish causal links between actions and behaviours undermine its acceptance (Packard, 2017; Archer, 1995).

Pragmatism, originating in the United States during the 1870s under Charles Sanders Peirce and William James, centres on the Pragmatic Maxim, a principle for clarifying the practical implications of hypotheses (Legg and Hookway, 2021). Peirce conceptualised truth as the ultimate consensus of inquiry participants, with reality embodied in this shared opinion. Derived from the Greek *pragma* (meaning action), pragmatism emphasises practical engagement and experiential learning (James, 2000). Dewey (2008) reoriented pragmatism towards human experience, positioning it as an alternative to positivism and interpretivism (Creswell and Plano Clark, 2007). Pragmatism advocates methodological pluralism, recommending mixed approaches to address research questions effectively (Johnson and Onwuegbuzie, 2004), and views knowledge as an instrument for action (Ormerod, 2006).

However, pragmatism is not without critique. Talisse (2014) argues that its alignment with democratic theory neglects distributive justice, while others note its tendency to privilege research outcomes over methodological rigour, rendering it more compatible with mixed method designs than purely quantitative or qualitative paradigms (Biddle and Schafft, 2015; Maxcy, 2003; Kaushik and Walsh, 2019). Tiercelin (1993) asserts that pragmatism's validity depends on its integration with experience and action.

For this study, a positivist epistemological stance is adopted, reflecting its emphasis on methodological rigour and reliance on established research traditions (Mentzer and Kahn, 1995; Halldorsson and Aastrup, 2003). This approach facilitates the identification of value constructs and their influence on leadership behaviours across culturally diverse millennial cohorts, aligning with the study's objective to test hypotheses through structured, quantitative analysis. Ontologically, the research assumes a realist perspective consistent with natural science principles, applied to social contexts where leadership behaviours may vary across cultures. Bruner's (1996) notion of understanding others' minds reinforces the relevance of this stance for exploring generational leadership dynamics.

3.3 Research Approach

Deduction and induction represent two principal approaches in social science research. Deductive reasoning follows a structured sequence aimed at theory testing: (a) deriving hypotheses from existing theory, (b) operationalising these hypotheses, (c) empirically testing them, (d) analysing outcomes, and (e) revising theory where necessary (Robson, 2002). In contrast, induction emphasises theory building through observation, seeking to explain social phenomena by interpreting how individuals construct their realities, often employing diverse qualitative methods (Saunders, Lewis and Thornhill, 2009). Table 15 summarises the key distinctions between these approaches, highlighting deduction's alignment with hypothesis-driven, quantitative research and induction's focus on emergent theory and contextual interpretation.

Table 15. Research Approaches

Research Approaches	Objectivism	Strictly interpretivist
Action research		Strictly interpretivist
Case studies	Have scope to be either	Have scope to be either
Ethnographic		Strictly interpretivist
Field experiments	Have scope to be either	Have scope to be either
Focus groups		Mostly interpretivist

Forecasting research	Strictly positivistic with some room for interpretation	
Futures research	Have scope to be either	
Game or role playing		Strictly interpretivist
In-depth surveys		Mostly interpretivist
Laboratory experiments	Strictly positivistic with some room for interpretation	
Large scale surveys	Strictly positivistic with some room for interpretation	
Participant-observer		Strictly interpretivist
Scenario research		Mostly interpretivist
Simulation and stochastic modelling	Strictly positivistic with some room for interpretation	

Source: Remenyi et al. (1998, p. 33)

Inductive and deductive reasoning represent contrasting approaches to theory development and testing in social science research. Induction is characterised as a 'data-driven' process, generating theory from empirical observations (Mantere and Ketokivi, 2013), whereas deduction applies pre-existing theoretical propositions to empirical testing (Reed, 2010) and application of theories into practice (Lee and Lo, 2014). Quantitative research typically adopts a deductive orientation, grounded in established theory and hypothesis testing, while qualitative research aligns with inductive reasoning, privileging emergent insights from data (Creswell, 2007). These paradigms reflect divergent ontological and epistemological assumptions: quantitative approaches presuppose a singular, measurable reality, whereas qualitative perspectives recognise multiple constructed realities shaped by individual interpretations (Onwuegbuzie and Leech, 2005, p.270).

Induction often follows the general inductive approach (Thomas, 2006), operationalised through Miles and Huberman's (1994) framework of data reduction, display, and conclusion drawing. Thomas (2006) outlines five iterative steps: (i) preparation and formatting of raw data files; (ii) close reading to identify themes; (iii) creation of categories through coding, including in vivo techniques; (iv) overlapping coding and allowance for uncoded text; and (v) continuous refinement of category systems, incorporating sub-themes and contradictory insights. These procedures underscore the interpretive complexity and labour-intensive nature of inductive analysis, given its reliance on subjective textual interpretation.

Conversely, deduction entails applying theoretical constructs to empirical contexts through systematic reasoning from general principles to specific observations (Hyde, 2000). Blaikie (2010) delineates six stages: (i) formulation of hypotheses; (ii) specification of validity conditions; (iii) critical examination of premises; (iv) data collection and measurement; (v) rejection of theory if empirical tests fail; and (vi) acceptance if results corroborate theoretical propositions. Blalock (1989) further advocates iterative refinement through goodness-of-fit assessments, enabling elimination of inaccurate assumptions and generation of revised theoretical models, often supported by mathematical and statistical modelling.

In summary, induction prioritises emergent theory grounded in contextual meaning, while deduction emphasises hypothesis testing and theoretical validation. Both approaches offer distinct advantages and limitations, with deductive reasoning particularly suited to the quantitative orientation of the present study.

Table 16. Major Differences between Deduction and Induction Approaches

Deduction emphasises	Induction emphasises
Scientific principles	Gaining an understanding of the meanings humans attach to events
Moving from theory to data	A close understanding of the research context
The need to explain causal relationships between variables	The collection of qualitative data
The collection of quantitative data	A more flexible structure to permit changes of research emphasis as the research progress
The application of controls to ensure validity of data	A realisation that the researcher is part of the research process
The operationalisation of concepts to ensure clarity of definition	Less concern with the need to generalise
A highly structured approach	
Researcher independence of what is being researched	
The necessity to select samples of sufficient size in order to generalise conclusions	

Source: Saunders, Lewis and Thornhill (2009, p. 127)

Saunders, Lewis and Thornhill (2016) identify three defining features of the deductive approach (see Table 16): (i) it facilitates investigation of causal relationships between concepts and variables; (ii) it operationalises concepts through quantitative measurement; and (iii) it enables generalisation of findings. These characteristics underscore deduction's alignment with hypothesis-driven research and structured theory testing.

Business research methods are commonly classified into quantitative and qualitative paradigms, each grounded in distinct epistemological assumptions

(Bryman and Bell, 2015). Quantitative research reflects a positivist orientation, privileging objectivity, measurement, and statistical inference, whereas qualitative research aligns with interpretivism, emphasising subjective meaning-making and contextual understanding. Table 17 summarises these foundational differences, illustrating how methodological choices are shaped by underlying philosophical commitments.

Table 17. Differences between Quantitative and Qualitative Research

	Quantitative	Qualitative
Principal orientation to the role of theory in relation to research	Deductive; testing of theory	Inductive; generation of theory
Epistemological orientation	Natural science model, in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism

Source: Bryman and Bell (2015, p. 38)

Bryman (2012, p.35) distinguishes quantitative and qualitative strategies as follows: “quantitative research can be constructed as a research strategy that emphasizes quantification in the collection and analysis of data,” whereas “qualitative research can be constructed as a research strategy that usually emphasizes words rather than quantification in the collection and analysis of data.” Despite the growing acceptance of qualitative approaches, academic discourse often privileges quantitative methods due to their perceived objectivity and precision (Helmer, Blumenthal and Paschen, 2020).

Qualitative research, while offering depth and contextual insight, faces challenges such as potential bias, ambiguity, and interpretive misrepresentation (Nørreklit, Nørreklit and Mitchell, 2007). Nevertheless, its strength lies in hypothesis generation and complementing quantitative findings (Tenny, Brannan and Brannan, 2022). Regional variations persist, with qualitative methods more prevalent in European scholarship compared to American practice (Bhimani, 2002).

Mixed methods research, integrating qualitative and quantitative paradigms, has gained prominence for its capacity to enhance validity, triangulate findings, and address complex research questions (Hurmerinta-Peltomaki and Nummela, 2006; Johnson and Onwuegbuzie, 2004). Adoption has surged, with publications increasing from 20 in the early 2000s to nearly 1,800 by 2013 (Maarouf, 2019). Mixed methods enable sequential or concurrent designs (Creswell and Plano Clark, 2007), facilitate multi-factor analysis (Raich, Müller and Abfalter, 2014), and strengthen confidence in results (O’Cathain, Murphy and Nicholl, 2010). However, critics caution against ad hoc integration, resource intensiveness, and philosophical inconsistencies (Easterby-Smith, Thorpe and Lowe, 2002; Bryman, 2007).

Despite these debates, mixed methods offer clear advantages through triangulation, leveraging complementary strengths of both approaches (Johnson and Christensen, 2012). Yet practical constraints such as time, expertise, and resource demands pose challenges for single researchers (Ivankova, Creswell and Stick, 2006; Doyle, Brady and Byrne, 2009). Methodological alignment remains critical, with quantitative approaches linked to positivism, qualitative to interpretivism, and mixed methods to pragmatism (Casula, Rangarajan and Shields, 2021).

Empirical evidence reinforces the dominance of quantitative designs in leadership research: Pioli et al. (2020) report that 52.5% of 431 authentic leadership studies published between 1997 and 2018 employed quantitative methods, reflecting their perceived objectivity (Li, 2022). Accordingly, this study adopts a quantitative strategy supported by a deductive approach, consistent with its positivist philosophical stance.

3.4 Research Design

Bryman and Bell (2015) identify five principal research designs: experimental, cross-sectional, longitudinal, case study, and comparative. Experimental design, though rare in business research, offers strong internal validity and confidence in causal inference. Cross-sectional design—often operationalised through surveys,

structured observation, and content analysis—facilitates examination of associations between multiple variables at a single point in time. Longitudinal design enables tracking of change over time by surveying the same sample at different intervals. Case study design, widely adopted in business research, provides rich contextual insights into complex phenomena, while comparative design applies identical methods across contrasting cases, typically within a cross-sectional framework.

Case study research is particularly valued for generating ‘thick descriptions’ and holistic understanding (Takahashi and Araujo, 2020; Easton, 2010). Ylikoski and Zahle (2019, p.1) define a case flexibly, encompassing organisations, groups, regions, or policies. While case studies offer depth and theoretical development, often characterised by novelty, testability, and empirical validity (Eisenhardt, 1989) limitations include low statistical representativeness and challenges in causal explanation. Issues arise in design selection (typical vs exceptional cases), evidence collection (conflicting data sources), and causal interpretation (Ylikoski and Zahle, 2019). Despite criticisms of narrow scope and exploratory bias (Aastrup and Halldórsson, 2008; Dul and Hack, 2008), case studies remain influential in theory building and problem-solving, as evidenced by Ebneyamini and Moghadam’s (2018) review of 344 articles employing this method. Yin (1981) further addresses validity and reliability concerns, advocating triangulation and purposive sampling to strengthen rigor.

From a qualitative perspective, thematic analysis offers a flexible approach for identifying and interpreting patterns within data (Braun and Clarke, 2006; Clarke and Braun, 2017). Its adaptability across sample sizes and data collection methods has made it one of the most widely adopted techniques in qualitative research.

Table 18. Process of Data Collection and Analysis

Stages in data collection and analysis	Creswell (2013) Procedural spirals	Merriam (2009) Levels of analysis	Miles et al. (2014) Concurrent nodes
1. Collect the data			Shift among the nodes iteratively during data collection
2. Engage with the data	Manage the files by transcribing the text files and reflecting in relation to the research questions for a sense of the issue	Scan transcripts and jot down notes, comments, observations and queries as memos	
3. Code the extracts from the data	Form a list of tentative codes that expands as the data are reviewed and re-reviewed	Identify units of data that are potentially meaningful segments to reveal information relevant to the research questions	Code the data extracts and write analytical memos
4. Generate the code categories from the codes	Reduce codes to categories in the process of categorical aggregation	Name categories that are abstractions derived from the data to reflect the data	Generate categories to condense the data

5. Conceptualise the themes from the categorised coded extracts	Interpret the data to abstract beyond the categories to the larger meaning of the data by linking the raw data with the research literature	Consolidate and reduce data to make meaning by linking interrelated elements in the data	Develop themes
6. Contextualise and represent the findings	Present a detailed picture of the analysed data	Interpret to make meaning and develop a model of interrelationships to build a framework	Compress meanings that emerge from the data and assemble the information using tables and networks

Source: Adapted from Peel (2020, p. 8)

Table 18 summarises key perspectives on thematic analysis; however, limitations persist. Guest, MacQueen and Namey (2014) argue that thematic analysis risks losing contextual depth, reducing the interpretive value of raw data. Gibson and Brown (2009) further critique it as a meta-analytical technique rather than a substantive analytical method. Saunders, Lewis and Thornhill (2016) emphasise the importance of interviewer competence in capturing non-verbal cues and tone, warning that omission of such contextual elements may obscure critical insights.

Despite these considerations, the present study adopts a case study design supported by quantitative data drawn from multiple organisations across two national contexts, focusing on millennial leaders and followers. A quantitative approach is selected for its perceived robustness and objectivity compared to qualitative methods, which have been criticised as ‘softer’ and less definitive

(Green, 1991). This choice aligns with the study's positivist stance and its emphasis on hypothesis testing and generalisability.

3.5 Sampling and Data Collection

Sampling is employed to capture a comparatively smaller, representative subset of a selected population to provide data sources for a particular study (Sharma, 2017). Sampling approaches generally fall into two categories: probability or non-probability (Tyrer and Heyman, 2016).

Probability sampling is widely regarded as the most efficient method for collecting reliable data based on population size (Kruskal and Mosteller, 1980). Cochran (1964) identifies four components of probability sampling:

- a) identification of possible samples that can be derived from the targeted population and the combination of units that can be included in these samples.
- b) samples must have a known probability of selection.
- c) the sample selection process should enable this probability of selection.
- d) the calculation of estimates should be known and linked to a unique estimate for each sample.

Yang and Banamah (2014) highlight key differences between stratified sampling and cluster sampling. Both methods group the population into specific classifications called strata and clusters. Stratified sampling selects elements from every stratum on a random basis, whereas cluster sampling initially selects only some clusters at random, followed by simple random selection within each chosen cluster. Critics of probability sampling argue that the approach is cost-driven, as Brick (2011, p. 877) notes: "cost is probably the single most important factor driving the search for new methods of sampling". Others have raised concerns about declining response rates (Groves et al., 2002).

Non-probability sampling enables elements to have an opportunity to be part of the study sample and includes quota sampling, accidental sampling, judgmental or purposive sampling, expert sampling, snowball sampling, and modal instant

sampling (Etikan and Bala, 2017). Etikan and Bala explain these methods as follows:

- Quota sampling: guided by specific characteristics such as gender or race, based on researcher convenience.
- Accidental sampling (also known as convenience sampling): similar to quota sampling but without reliance on specific characteristics.
- Judgmental or purposive sampling: based on the researcher's judgement.
- Expert sampling: seeks the consent of experts in the area of study.
- Snowball sampling: uses networks to gain access to group members.
- Modal instant sampling: selects samples based on the most frequent cases.

Vehovar, Toepoel and Steinmetz (2016) add further iterations of convenience sampling, including volunteer sampling, mail-in surveys, tele-voting (or SMS voting), self-selection in web surveys, and network sampling. Drawbacks of non-probability sampling include coverage bias due to the lack of representation of all subpopulations (Räsänen, 2006).

Convenience sampling is adopted for this study as it is often associated with case study research design (Taherdoost, 2016), frequently used in quantitative studies (Etikan, Musa and Alkassim, 2016; Scholtz, 2021), and a significant body of social science research is founded on convenience samples (Dooley and Lindner, 2003). The advantages of convenience sampling include ease of deployment, affordability, and accessibility to respondents (Etikan, Musa and Alkassim, 2016). However, disadvantages include susceptibility to bias (Mackey and Gass, 2005) and limited generalisability, as results from one organisation may differ from another, even within the same sector, due to variations in employment selection criteria (Landers and Behrend, 2015). Peterson and Merunka (2014) highlight the controversial use of undergraduate college students in behavioural studies based on convenience samples. This concern is echoed by Bello et al. (2009), who argue

that research involving processes, structures, and outcomes lacks generalisability when based on student samples.

This research utilised the services of a commercial non-probability online panel provider; further details are provided later in this section. The use of such providers has become increasingly common, ranging from start-up companies to established organisations such as Ipsos Mori, Qualtrics, and Survey Sampling International (SSI), as well as crowdsourcing platforms like Amazon Mechanical Turk (MTurk) and Prolific (Callegaro et al., 2014).

Callegaro et al. (2014) support the panel provider approach, noting that these organisations typically manage the demographic composition of respondents, safeguard against coordinated attacks, and mitigate biases associated with digital coverage. However, these advantages do not generally apply to crowdsourcing providers, whose primary differentiator is ease of access to large convenience samples. Respondents for both panel and crowdsourcing providers are typically incentivised through compensation rather than intrinsic interest, with rewards ranging from monetary payments and discount vouchers to prize draws (Hillygus, Jackson and McKenzie, 2014).

Modern survey tools such as SurveyMonkey, Sogolytics, Servicate, SurveyLegend, Microsoft Forms, and Google Forms enable researchers to deploy data collection efficiently and cost-effectively, requiring minimal or no training.

Two studies were conducted for this research. The first study (Study I) employed an online questionnaire targeting millennial leaders within SMEs, primarily in the UK and Malaysia. The focus was on leaders demonstrating strong self-awareness, authentic leadership, and entrepreneurial spirit. The questionnaire incorporated measures developed by Walumbwa et al. (2008) for authentic leadership and Renko et al. (2015) for entrepreneurial leadership, alongside questions on personal values based on Schwartz (1992). Additional items explored technology adoption and value-based considerations.

The second study (Study II) followed a similar online questionnaire format but focused on followers of millennial leaders within SMEs in the UK and Malaysia.

These two studies provide insights into leadership approaches and the core values influencing leaders and followers across both contexts.

3.5.1 Questionnaire Format

The questionnaire comprised of questions based on authentic leadership (16 items), entrepreneurial leadership (8 items), personal values (10 items) followed by technology questions (2 items).

Study I targeted leaders sampled from the two respective countries. Study I leader participants criteria included the following:

- a. working in an SME (up to 250 employees),
- b. 20 to 40 years of age,
- c. management or supervisory role,
- d. consent to be part of the research,
- e. based in UK or Malaysia.

The Study I questionnaire comprised of a total of 46 questions (leaders' questionnaire available in Appendix E). This is divided into six sections based on the following format:

1. Demographic details of the participants (age, gender, position in the organisation, highest qualification, and geographic location, consisting of 5 items)
2. Authentic leadership style of the leaders (16 items)
3. Entrepreneurial leadership style of leaders (8 items)
4. Leaders' personal values (10 items)
5. The use of technology (2 items)
6. Leaders' core values (3 items)

Study I participants were required to complete an online questionnaire comprising of 46 questions. The first question required participants to respond if they were happy to proceed with the study. The next 5 questions were primarily gathering demographic details. Questions 7 to 31 comprised of a five-point Likert scale format ('Not at all', 'Once in a while', 'Sometimes', 'Fairly Often', 'Frequently'). The

exception was question 15 where respondents were requested to select one answer to gauge their engagement. Questions 32 to 41 consisted of a four-point Likert scale format ('Opposed to my principles', 'Not important', 'Important', 'Of supreme importance'). Questions 42 to 43 referred to a five-point Likert scale ('Strongly disagree', 'Disagree', 'Neutral', 'Agree', 'Strongly agree'). The remaining 3 questions were open ended (Appendix E). The completion time was approximately 10 minutes.

Likert scale has its benefits and drawbacks. It can be easily constructed, administered and respondents find it easy to answer whereas the drawbacks are that it takes longer to complete, and respondents must read the entire statement (Malhotra, 2006).

The second study (Study II) focused on the followers with a similar focus on the respective countries. Study II follower participants criteria included the following:

- a. working in an SME (up to 250 employees),
- b. 20 years of age or older,
- c. reporting to a manager/supervisor within the approximate age range of 20 to 40 years,
- d. consent to be part of the research,
- e. based in UK or Malaysia.

The Study II questionnaire comprised of a total of 44 questions (followers' questionnaire available in Appendix F). This is divided into five sections based on the following format:

1. Demographic details of the participants (reporting to a manager/supervisor within age range of 20 to 40, age, gender, highest qualification, and geographic location, comprising of 5 items).
2. Authentic leadership style of the leaders (16 items).
3. Entrepreneurial leadership style of leaders (8 items)
4. Leaders' personal values (10 items)
5. The use of technology (2 items)

Study II participants had a similar online questionnaire but comprised of 44 questions. The first question solicited participants' consent to proceed with the research. The second question required confirmation if participants were reporting to managers or supervisors within age range of 20 and 40. The next 4 questions focused on collecting demographic data followed by questions 7 to 32 requiring responses based on a five-point Likert scale format ('Not at all', 'Once in a while', 'Sometimes', 'Fairly Often', 'Frequently'). Question 15 had a similar one selection answer for questionnaire engagement. Questions 33 to 42 consisted of a four-point Likert scale format ('Opposed to his/her principles', 'Not important', 'Important', 'Of supreme importance'). Questions 43 to 44 referred to a five-point Likert scale ('Strongly disagree', 'Disagree', 'Neutral', 'Agree', 'Strongly agree'). The completion period has a similar approximate time of 10 minutes (Appendix F).

The initial approach considered was to select UK leaders from companies that are members of their local British Chambers of Commerce, featuring SMEs and new start-ups, given that the British Chambers of Commerce is recognised as the largest and most influential business network in the UK (Northamptonshire Chamber, 2020). In Malaysia, however, the ethnic Chinese community has a strong presence within the commercial sector. The Malaysian business community, particularly at managerial levels, is dominated by ethnic Chinese (Bhopal and Rowley, 2005). The Chinese Chambers of Commerce is the earliest national-level chamber to achieve complete regional representation in the country, with more than 100,000 direct and indirect members and over 5,000 youth business members (ACCCIM, 2019). This community also reports a higher monthly household income approximately 8,750 Malaysian ringgit, over 2,500 ringgit higher than Malay (Bumiputera) households as of 2016 (Hirschmann, 2020). The location criteria for leaders in both countries were based not only on major cities but also aimed to capture any leadership nuances across the geographical spread.

Study II was designed to compare the first study with the views of followers using a similar questionnaire structure. Employees were asked to identify relevant leadership values within their respective companies. No information was collected regarding the leaders or the followers' job responsibilities. This decision was made

to protect participant anonymity and address potential concerns from both individuals and organisations, thereby encouraging participation (Breevaart and Zacher, 2019).

A pilot study was conducted with the researcher's friends and family members who are millennials, to gather feedback on the survey questions and overall format, particularly focusing on millennial leaders. Hazzi and Maldaon (2015) emphasise the role of pilot studies in identifying distribution, feasibility, and potential modification issues prior to launching the main study. Six individuals participated in this exercise. Baker (1994) suggests that a pilot sample size of 10–20% of the main sample is generally acceptable. Feedback primarily concerned clarification of certain questions, with particular emphasis on gender options. Suggestions included adding 'non-binary', 'other', and 'prefer not to say' options, which were incorporated into the questionnaire before data collection. Cabanda, Fields and Winston (2011) highlight the importance of pilot studies in ensuring questionnaire reliability and validity.

Emails containing the questionnaire were sent to respondents identified in randomly selected companies. However, the researcher encountered low response rates. Physical travel restrictions due to COVID-19 and widespread online fatigue among targeted respondents contributed to this challenge. Boyer and Swink (2008) note that "survey fatigue" among business professionals often hampers the collection of valid responses. The researcher leveraged personal networks to facilitate data capture, but only seven valid responses were obtained from leaders, with none from followers. Several factors may explain this non-participation. Eatough, Shockley and Yu (2016) suggest that management may discourage employees from accessing survey websites during work hours, while Rogelberg, Luong, Sederburg and Cristol (2000) point to low participant motivation, often linked to turnover intentions and reduced organisational commitment. Consequently, the researcher turned to social media platforms primarily Facebook and Reddit to capture follower data, resulting in eighteen responses. This lower-than-expected number aligns with Yoa and Cao's (2017) contention that frequent social media use can lead to social media weariness.

The absence of adequate responses during the initial data collection phase prompted the researcher to engage a commercial online panel provider.

Centiment LLC was contacted and commissioned to conduct the data collection process for both countries. Centiment holds a 4.9-star rating on Trustpilot (2022), based on 66 reviews. The provider is GDPR and CCPA compliant and utilises a panel of respondents recruited from multiple sources, primarily social media platforms such as Facebook and LinkedIn. Furthermore, Centiment's client portfolio includes reputable organisations such as Harvard University, Walmart, BMW, Stanford University, McKinsey & Company, and Lyft (Centiment, no date).

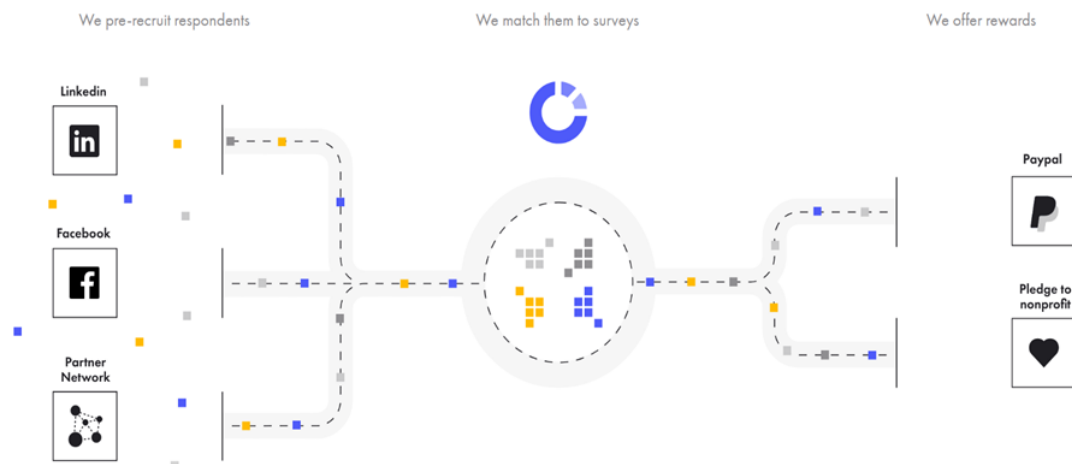
There are notable advantages to using an online panel provider. For instance, such providers offer access to unique populations, including individuals who may be reluctant to express opinions openly or hesitant to attend in-person meetings (Wright, 2005). Porter et al. (2019) emphasise that online panels help overcome challenges associated with traditional convenience sampling, which often requires considerable effort and time to secure organisational participation. Additionally, participation can be sourced from a large and diverse pool, thereby increasing representativeness (Gleibs, 2017). In the present study, online survey fatigue and lack of enthusiasm among respondents were particularly prevalent during the COVID-19 pandemic, further justifying the use of an online panel provider.

Moreover, given that the questionnaires addressed leadership values and moral actions, topics of a sensitive nature, respondents may have been unwilling to provide candid feedback through traditional data collection methods (Porter et al., 2019). Online panels also facilitate access to niche respondents or geographically concentrated samples and offer cost efficiency with rapid turnaround times (Fang, Wen and Prybutok, 2013).

Centiment compensates respondents for their participation and employs a combination of IP address, device type, screen size, and cookies to ensure that only unique respondents complete the survey, a process referred to as "fingerprinting" (Centiment, no date). No personal information is collected, as confirmed during communications with the company's project manager and supported by documentation on the provider's website. Data is not retained after

delivery of results, and all transmitted data is encrypted using Transport Layer Security (TLS) (Centiment, no date). Upon completion of the data collection process, the panel provider delivered the raw data without conducting any further analysis.

Figure 12. Centiment's Data Collection Process



Source: Centiment (accessed: 17 February 2022)

The researcher constructed the survey using the panel provider's platform and included key supporting documents: the Participant Information Sheet (Appendix B), Consent Form (Appendix C), and Participant Debrief (Appendix D). All participants were required to answer an initial question confirming their willingness to proceed with the research, applicable to both studies (see Appendix E and Appendix F).

The criteria for selecting the leader sample were as outlined earlier:

- a. type of company and employee numbers.
- b. age range.
- c. specific geographical area.
- d. role within the company.

The followers' study applied similar criteria, except that the role within the company was not required. However, data regarding the line manager or supervisor's age category (millennial) was necessary.

The panel provider initially conducted a soft launch by distributing the surveys online to no more than $N = 250$ employees, ensuring alignment with the selection criteria. The leaders' responses during this phase totalled 129 participants across both countries, all of whom confirmed their willingness to participate. Their ages ranged from 20 to 40, represented the required locations, and reflected varying organisational positions (Figure 13). The followers' responses comprised 195

participants, all reporting to a manager or supervisor aged between 20 and 40 and providing valid age and location details (Figure 14).

Following verification of the soft launch data, the researcher instructed the panel provider to proceed with full distribution. The provider confirmed successful survey dissemination and compensated participants through small monetary incentives or charitable pledges to non-profit organisations of their choice (Figure 12).

In Study I, a total of 65 leaders responded from the UK and 64 from Malaysia. Study II generated 130 follower responses from the UK and 65 from Malaysia. These figures were supplemented by responses collected during the researcher's initial attempts: 11 followers from the UK, 7 from Malaysia, 4 leaders from the UK, and 3 leaders from Malaysia. The final sample comprised:

- UK leaders: 69
- Malaysian leaders: 67
- UK followers: 141
- Malaysian followers: 72

This resulted in a total sample size of 349 participants.

Figure 13. Soft Launch Leaders' Criteria Fit (N=129)

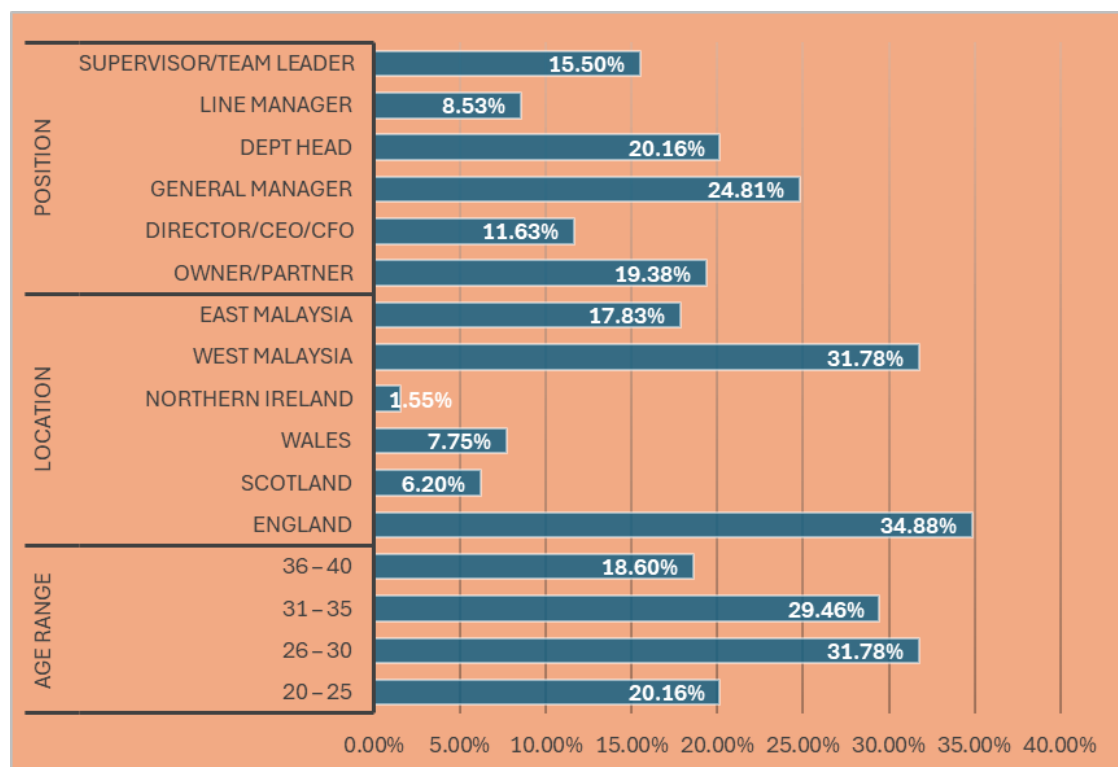
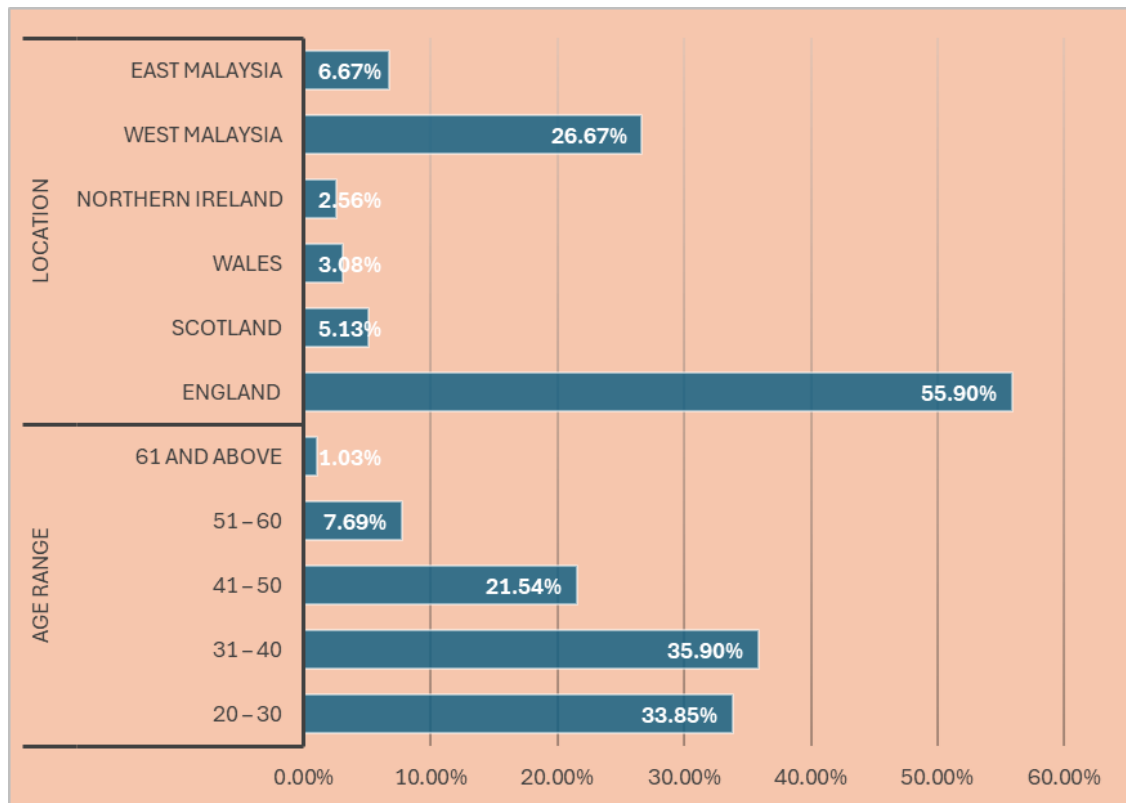


Figure 14. Soft Launch Followers' Criteria Fit (N=195)



3.6 Data Reliability and Validity

Researchers have noted that panel providers typically utilise respondents' IP and email addresses for verification and to exclude omitted or invalid responses (Hays, Liu and Kapteyn, 2015). Centiment LLC applies a more comprehensive approach, combining IP address, device type, screen size, and cookies to authenticate respondents. Additionally, the provider maintains a fraud score based on prior survey completions and demographic consistency; respondents who breach these requirements are banned. An invisible ReCAPTCHA is also employed to deter automated bots. Further details are provided in Appendix I.

The researcher conducted additional checks to ensure data reliability and validity. The first step involved reviewing data for consistency by examining unique session identities to confirm that no respondent participated multiple times in the same study (Arndt et al., 2022). The second step assessed the time taken to complete the questionnaire, cross-referencing start and end timestamps to identify

“speeders”, respondents who rush through without adequate attention (Smith et al., 2016). DeSimone and Harms (2018) suggest that completion times averaging less than 2.0 seconds per item indicate a speeder. Outcomes of these checks confirmed that all data had unique session identities, and no speeders were detected.

The third step involved verifying responses to an attention-check question: “To ensure full engagement, please select ‘fairly often’ for this question.” Such questions, referred to as instructional manipulation checks, assess whether respondents read and engage with the survey content (Peer et al., 2022). All respondents answered this question correctly, selecting “fairly often,” thereby demonstrating engagement and reliability.

3.7 Role of the Researcher

Quantitative researchers are required to maintain an objective perspective and take steps to minimise preconceptions that could distort findings through personal beliefs (Soiferman, 2010). Wacquant and Bourdieu (1992) argue that researchers are often influenced by knowledge biases stemming from their social background, intellectual positioning, and processes of intellectualisation. Ponterotto and Grieger (2008) emphasise the importance of cultural self-awareness and cultural competence, an approach supported by Fassinger and Morrow (2013), who highlight the need for culturally competent communication skills, respect for participants’ cultures, and efforts to challenge cultural stereotypes.

Miyazaki and Taylor (2007) note that a researcher’s background reflects cultural and experiential attributes that may influence interactions through verbal or non-verbal cues. They propose several strategies to manage interaction biases, including increased interaction to build trust and gather richer data; use of multiple and diverse data collectors to balance potential biases; triangulation through multiple data sources such as archives, observations, and self-reports; pretesting of data collection methods.

While these guidelines are particularly relevant for interactive methods such as interviews, this study employed online questionnaires to mitigate potential bias.

This approach was also applied in the second study, where followers completed online surveys representing their respective companies.

The researcher's personal and professional background warrants reflection. Born in Sabah, East Malaysia, located on Borneo, the world's third-largest island (MAVCOM, 2023), the researcher completed eight years of secondary education in India before returning to Malaysia. This experience significantly shaped his worldview due to cultural and religious influences. Educated in a Jesuit-run boarding school, he attended weekly Mass, gaining early exposure to Christian teachings while reconciling these with his Hindu upbringing. These conflicting influences reinforced an external locus of control perspective.

Professionally, the researcher worked in Malaysia's Information Technology sector for fourteen years, initially in technical roles supporting multinational Japanese manufacturing firms. Prolonged engagement with Japanese clients fostered curiosity about their work culture and led to adaptation of their values. Later, he transitioned into sales and marketing and founded four businesses within the same industry. After immigrating to the UK, he spent twenty-one years in the education sector. His leadership style evolved from autocratic, shaped by Malaysian corporate norms and entrepreneurial experience, to a team-oriented, coaching approach in the UK. This transformation required significant time and reflection, marking a profound shift in his leadership philosophy.

Exposure to diverse cultures such as Indian, Japanese, Iranian (through two years living with an Iranian family), and Chinese (via family ties) broadened the researcher's understanding of customs and traditions, enabling meaningful cross-cultural relationships. This cultural awareness inspired his interest in cross-cultural research. Early teaching experiences in human resource management introduced Hofstede's cultural dimensions, prompting questions such as: Do Malaysia and the UK differ significantly on cultural scales? Do these differences influence leadership theories? Are they consistent across generations? These questions ultimately motivated the current study.

Denzin and Lincoln (2008) argue that, within qualitative research, the researcher is considered an instrument of data collection, meaning that data is mediated through a human lens. Greenbank (2003) suggests that researchers should disclose relevant aspects of self, including biases, assumptions, expectations, and experiences, to establish their capacity to conduct the research. Furthermore, clarity regarding the researcher's role, whether as an outsider or a member of the group, is essential. Klitgaard, Gottlieb and Svidt (2021) note that researchers may begin as group members and later adopt a more objective stance.

In contrast, quantitative research requires neutrality, focusing on objectivity and minimising subjectivity (Ghanad, 2023; Lorette, 2023). While cultural familiarity could introduce bias in qualitative approaches involving interviews, this study adopts a quantitative design, reducing such risks. Nevertheless, the researcher acknowledges these influences and has adopted a reflexive stance guided by six self-interrogating "thinking tasks" (see Table 20), derived from Bourdieu's reflexive sociology. This approach prioritises the "voice of the data" to ensure unbiased and objective outcomes.

Pierre Bourdieu, widely regarded as one of the foremost sociologists of the 20th century, authored more than 40 books and 200 articles. His work has been pivotal in shaping modern understandings of culture and society (Fries, 2009).

Table 19. Thinking Tasks

No.	‘Thinking Tasks’
1	Researcher to self-interrogate own social background, position in intellectual field and intellectual biases
2	Researcher to self-interrogate own conceptualising and theorising by applying the same concepts deployed to scrutinise the phenomenon being studied to your own position as the researcher and involvement in the study
3	Researcher to self-interrogate into intersectionality and social categorisation (and their meanings and social constructions); the interconnections and interdependencies as well as treatment, and categorisation to explore how reasonable fixed categories might influence knowledge-production. As a tool, the above should also be directed towards how different facets of the researcher’s background might influence the research process in various ways
4	Researcher to self-interrogate into own ‘unthought categories’ that he or she might not be aware of - as re-framing of own analysis might change due to learning encounters with an other – through external scrutiny by a collaborator known to the researcher but external to the research process
5	Researcher to self-interrogate into and keep questioning about things we know (or think we know) re-analysing and re-engaging (or dis-engaging) in regard to the collected data and findings to discover new nuances and understandings of said data
6	Researcher should evaluate how ‘epistemic reflexive’ self-interrogation has the potential of executing new action in and benefiting wider society (for example, the United Nations’ Sustainable Development Goals) by avoiding science reproducing social and political hierarchies and values

Source: Adapted from Guttormsen and Moore (2023)

Based on Guttormsen and Moore's (2023) six 'thinking tasks', the researcher evaluated each as outlined in Table 19.

Task 1: Social Background, Intellectual Field, and Biases

The researcher is of Malaysian Indian ethnicity, holds Malaysian nationality, and is conversant in English, Bahasa Malaysia, Malayalam, Hindi, and Tamil. He recognises the influence of language and aligns with Nelson Mandela's assertion: "If you talk to a man in a language he understands, that goes to his head. If you talk to him in his own language, that goes to his heart" (Smith, 2020). Academically, the researcher holds a Master of Education in Leadership and Management and has practised diverse leadership approaches in Malaysia and the UK. His realist ontological stance views reality as objectively defined facts (Lawani, 2021). These experiences underpin his interest in exploring cultural differences between the two countries.

Task 2: Intersectionality and Social Categorisation

This task builds on sociocultural experiences rather than a single category such as nationality. A potential intellectual bias identified is the reliance on Hofstede's cultural dimensions when comparing both cultures, which may overshadow millennial leaders lived experiences. Applying a Western model to Malaysian culture may not fully capture local nuances, as highlighted in the literature review.

Task 3: Conceptualising and Theorising

Here, the researcher reflects on his role as a cultural producer (King, 2000). Research questions might have differed had they been framed from a more localised perspective. During the pilot stage, discussions with millennial leaders from both countries provided valuable feedback on questionnaire design and the relevance of proposed research questions.

Task 4: External Scrutiny and New Learning

External feedback is essential for broadening perspectives. The researcher is currently engaging with peers to scope a collaborative article that extends this study to include multiple generations and additional countries.

Task 5: Revisiting Data through Engagement and Analysis

Re-examining data enables the researcher to challenge preconceptions. Initial analysis employed standard statistical models; however, subsequent review revealed opportunities for Structural Equation Modelling, which would not have emerged without deeper engagement.

Task 6: Reflexivity as a Catalyst for Social Change

Researchers should consider broader implications beyond answering research questions or testing hypotheses. This study aims to contribute to leadership scholarship and organisational practice by enhancing understanding of millennial leaders' personal values in Malaysia and the UK. Insights gained may inform leadership development programmes and foster values aligned with organisational goals.

3.8 Ethical Considerations

Research ethics requirements concerning the treatment of respondents include minimising the risk of harm, obtaining informed consent, protecting anonymity and confidentiality, avoiding deceptive practices, and ensuring the right to withdraw at any time (Israel and Hay, 2006). Rana, Dilshad and Ahsan (2021) elaborate on these principles:

- Minimising risk of harm: Participants should not experience physical harm, psychological distress, social humiliation, financial loss, or invasion of privacy.
- Informed consent: Explicit consent must be obtained, including participants' rights to access their information and withdraw freely.
- Anonymity and confidentiality: Researchers must safeguard participants' private and sensitive information.
- Avoiding deception: While covert research may occasionally be justified, participants should be debriefed about any deception as far as possible.
- Right to withdraw: Participants may withdraw at any stage without providing reasons.

Quantitative research encompasses both experimental and non-experimental studies (Drew, Hardman and Hosp, 2008). Experimental designs often raise ethical concerns, particularly where interventions require significant self-disclosure. Conversely, qualitative approaches are sometimes perceived as less ethically complex due to their conversational nature (Cribb, 2004), though integrity of data remains paramount.

Instruments used for data collection adhered to BERA (2011) guidelines. Respondents were informed that participation was voluntary, and consent was secured prior to commencement. Both studies treated respondents equally, ensuring no group had an advantage or perceived advantage. Responses were recorded anonymously, and participants' privacy was respected. Withdrawal rights were clearly communicated, and the researcher's contact details were provided

for further enquiries. Contact information for relevant organisations in the UK and Malaysia was also included to support participants in case of psychological distress.

Data collection was managed by Centiment LLC, a commercial online panel provider. Centiment does not request personal details from respondents (termed “audience panel”) but refers them to client policies. Participants are informed only of estimated completion time and reward, reducing selection bias. Centiment employs behavioural scoring systems to monitor participant integrity and uses TLS security with AES-256-bit LUKS encryption. Surveys and related data may be deleted within 60 days of account inactivity. Centiment complies with GDPR and CCPA guidelines (Appendices H and I).

The study complied fully with the University of Cumbria (2016) Research Ethics Policy. The required Research Ethics (Human) application was submitted and approved prior to data collection. The researcher completed mandatory ethics training as part of the researcher development programme. No conflicts of interest existed, and no commercial gains, grants, or funding were received that could compromise impartiality.

3.8.1 Limitations

Although the data collection process was managed and executed by Centiment LLC, a commercial online panel provider offering pre-screened respondents to enhance reliability, it is important to acknowledge limitations associated with this approach.

1. Data Quality Concerns

Zhang and Gearhart (2020) found that respondents recruited via MTurk (Amazon’s Mechanical Turk) demonstrated higher data quality compared to those from commercial panel providers, based on completion rates and success in manipulation checks.

2. Online Questionnaire Issues

Potential challenges include sampling bias (as not all prospective respondents have internet or email access), self-selection bias (participants choose whether to join, breaching probability sampling principles) (Bethlehem, 2010), device limitations, and connectivity issues (Jaeger and Cardello, 2022).

3. Low Response Rates and Perceived Impersonality

Email invitations may be ignored or treated as junk mail. Online questionnaires can feel impersonal, raising concerns about privacy and contributing to low response rates (Evans and Mathur, 2018).

4. Risk of Data Falsification

Bell and Gift (2023) refer to “character misrepresentation” in online surveys, where respondents misrepresent themselves to qualify for participation and compensation. This can lead to duplicate entries by “professional survey takers” seeking to maximise rewards.

5. Lack of Transparency in Sampling

Commercial providers often do not disclose the proportion of probability versus non-probability samples (Van Ryzin, 2008). Many studies using online surveys rely on non-probability sampling, where sample details remain unknown (Lehdonvirta et al., 2020).

6. Withdrawal Rights and Incentives

Concerns arise regarding whether respondents can freely withdraw if compensated, particularly if payments form part of regular income (Gleibs, 2017). Research indicates that online respondents are more likely to participate for financial incentives (Hillygus et al., 2014; Sparrow, 2007).

3.9 Measurement

The questionnaires for Study I and Study II comprised close-ended multiple-choice items followed by Likert-scale questions. Additionally, the Study I questionnaire included a section with open-ended questions. The rationale for incorporating open-ended questions was to capture spontaneous responses, reduce bias associated with suggested options, and identify unexpected insights beyond those anticipated in close-ended items (Reja et al., 2003). However, as noted by Reja et al., open-ended questions present drawbacks, including time-consuming coding and higher rates of non-response.

Study I: Leaders' Questionnaire

The leaders' questionnaire consisted of six sections:

1. Demographics – Six questions (Q1–Q6), including consent to participate.
2. Authentic Leadership – Sixteen questions (Q7–Q23), with Q15 serving as an engagement check.
3. Entrepreneurial Leadership – Eight questions (Q24–Q31).
4. Personal Values – Ten questions (Q32–Q41).
5. Technology Use in Leadership – Two questions (Q42–Q43).
6. Values Influencing Leadership Approach – Three open-ended questions (Q44–Q46).

In this study, 40% of Malaysian respondents and 51% of UK respondents either skipped the open-ended questions, provided one-word answers, or submitted invalid responses. The full questionnaire is provided in Appendix E.

Study II: Followers' Questionnaire

The followers' questionnaire mirrored the structure of the leaders' questionnaire, with wording adapted to capture perceptions of millennial leaders. The sixth section was omitted, and one additional question was included to measure the perceived positive impact of leaders on staff (Q32). Unlike Study I, there were no unanswered or invalid responses in Study II. The full questionnaire is available in Appendix F.

Table 20. Latent and Observed Variables

	Latent Variables	Observed Variables
Authentic Leadership	Self-awareness	4 items
	Balanced processing	3 items
	Internalised moral perspective	4 items
	Relational transparency	5 items
Entrepreneurial Leadership	Entrepreneurial orientation	6 items
	Creativity supportive behaviour	2 items
Personal Values	Power	1 item
	Achievement	1 item
	Hedonism	1 item
	Stimulation	1 item
	Self-direction	1 item
	Universalism	1 item
	Benevolence	1 item
	Tradition	1 item
	Conformity	1 item
	Security	1 item

Authentic leadership is measured by a 16-item questionnaire based on ALQ (Walumbwa et al., 2008). The ALQ comprise of descriptive statements requiring leaders and followers to rate based on a five-point Likert scale (“Not at all; Once in a while; Sometimes; Fairly Often; Frequently/Always”). The statements describe the behaviour depicted by the leaders that respondents are required to rate based on the level of frequency for example “I admit mistakes when they are made” (leaders’ questionnaire), “Admits mistakes when they are made” (followers’ questionnaire) is an observed variable related to latent variable Self-awareness.

Entrepreneurial leadership consisted of an 8-item questionnaire based on ENTRELEAD (Renko et al., 2015). This set of questionnaire has a similar focus on descriptive statements and required respondents to rate the frequency of leader’s behaviour based on a five-point Likert scale, similar responses to ALQ. Examples include “I often come up with ideas of completely new products/services that we could sell” (leaders’ questionnaire), “Often comes up with ideas of completely new products/services that the company could offer” (followers’ questionnaire), observed variable linked to latent variable Entrepreneurial orientation. As stated earlier, an additional question was provided for the followers to gauge the level of influence of the leaders namely “has a positive impact on staff”.

Personal values are evaluated via a 10-item questionnaire developed by Schwartz (1992). The questionnaire comprises of life-guiding values such as universalism (example broad-mindedness, beauty of nature and arts, social justice, a world at peace, equality, wisdom, unity with nature, environmental protection), applies to both leaders and followers' questionnaires. Responses are measured via a four-point Likert scale, "opposed to your principles; not important to you; important to you; of supreme importance to you" (leaders' questionnaire), "opposed to his/her principles; not important; important; of supreme importance" (followers' questionnaire). Examples of Power latent variable is observed variables of social power, authority and wealth.

To ensure respondents were fully engaged in completing the questionnaire, one question was included to test their involvement, "To ensure full engagement, please select 'fairly often' for this question" (this applied to both the leaders and followers' questionnaires). Two additional questions were included to ascertain the respondent's involvement with technology, "I use Microsoft products such as Excel and/or Access for staff data analysis; I use specialised software for staff data analysis" (leaders' questionnaire), "He/she uses Microsoft products such as Excel and/or Access for staff data analysis; He/she uses specialised software for staff data analysis" (followers' questionnaire). Responses were based on a five-point Likert scale ("strongly disagree; disagree; neutral; agree; strongly agree").

The three additional open-ended questions for the leaders require free text format as responses, "What are the core values that drive your behaviour? (for example, Compassion, Collaboration, Innovation, Responsibility, Diversity, Integrity, Quality, Trust) up to 5 Core Values; What is one way you would instil your core values in your staff?; Think of a time you had to change the way of working in the company. What is one way you ensured your staff adopted the change?" These questions were incorporated to detect any inconsistencies in the respondents' inputs such as contradictory responses (Leung, 2001). The results were not included in this study due to the lack of detailed responses from the respondents. Most respondents selected the approach of providing one-word answers. This could be based on the perception by respondents that concealing information may exceed confidentiality boundaries (Rasinski et al., 1999).

3.10 Analysis

This study utilised SPSS (version 24) and Jamovi (version 2.6.44) as the primary statistical analysis tools.

SPSS

IBM SPSS (Statistical Package for the Social Sciences) is widely recognised in both academic and business contexts for its ease of data manipulation and execution of statistical procedures without requiring programming knowledge (Ward, 2013). SPSS has supported quantitative data analysis for over four decades (Sardareh, Brown and Denny, 2021) and remains the most widely used statistical software globally (Arkkelin, 2014; Saunders and Lewis, 2017). Limitations include its inability to analyse multiple data formats simultaneously and its restriction to calculating effect size for only one measurement (Sen and Yildirim, 2022). Nevertheless, Arkkelin (2014) defends its versatility, citing its capacity for diverse analyses, data transformation, and flexible output formats, making it suitable for this research.

Jamovi

Jamovi is an open-source, community-developed platform offering a free and effective solution for academic research (Şahin and Aybek, 2019). Designed to integrate recent developments in statistical methods, Jamovi provides fully integrated packages accessible to users without coding experience (Arora et al., 2020; Caldwell, 2022). Its versatility includes the ability to import datasets from Excel and SPSS (Eser and Aksu, 2022). However, limitations exist: Jamovi struggles with performing a priori comparisons (Strunk and Mwavita, 2022) and treats integers with fewer than 20 distinct values as ordinal variables, which may affect visualisation (Fife et al., 2021). Despite these drawbacks, Jamovi offers significant advantages, including real-time results, elimination of intermediate syntax (unlike SPSS), and full reusability of commands and outputs (Sardareh, Brown and Denny, 2021).

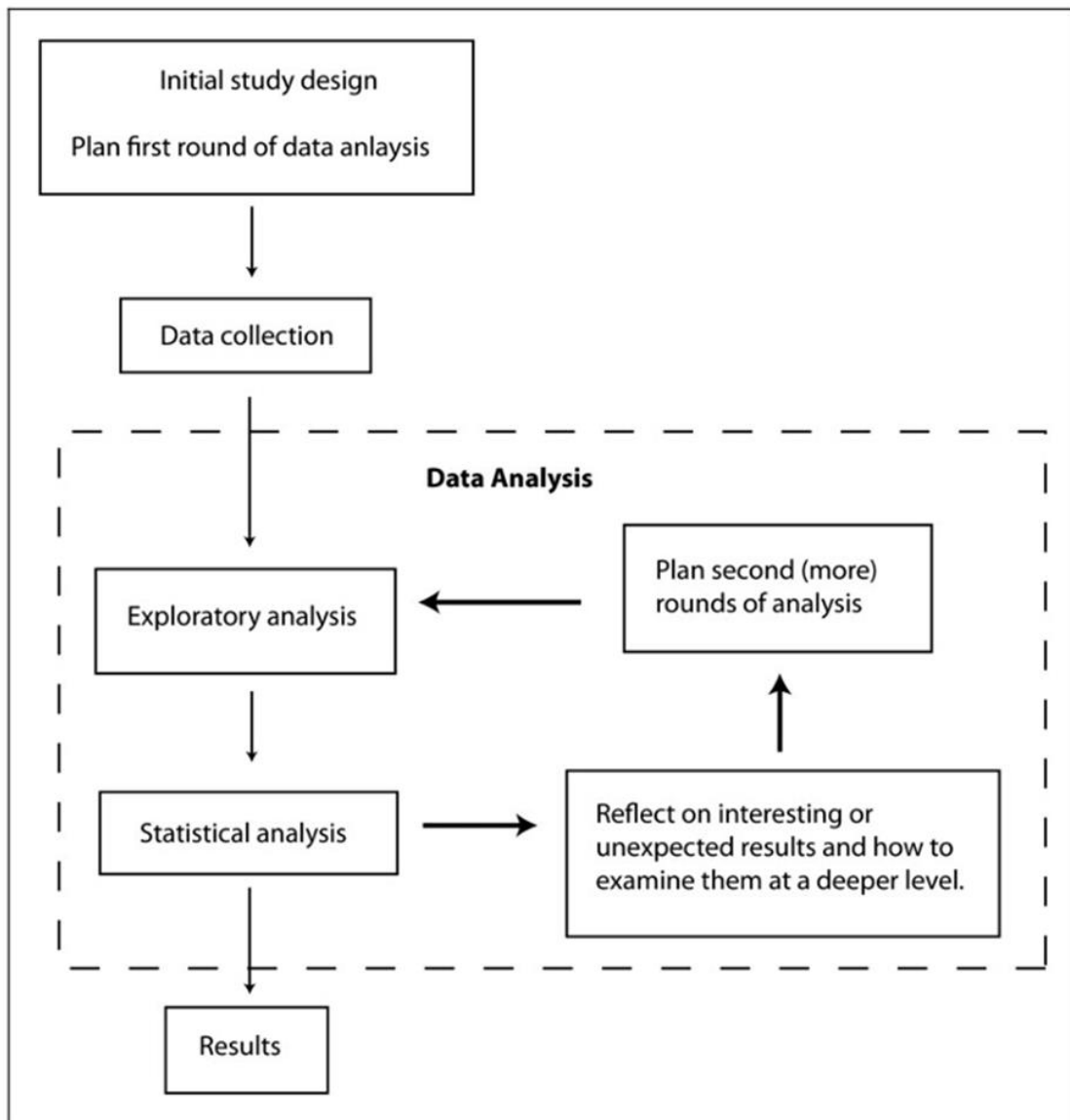
3.10.1 Quantitative Data

Quantitative data is typically employed to gain insights into a specific population and includes measurements such as frequencies, percentages, proportions, and relationships between variables (Goertzen, 2017). Goertzen further notes that while quantitative data reveals trends across data points, it does not explain underlying motivations or answer the “why” behind observed behaviours. Cohen and Manion (1980) emphasise that quantitative data reflects what is in the real world, as opposed to what ought to be.

The analysis of quantitative data depends on the researcher’s objectives whether to describe a situation or explain a phenomenon using appropriate statistical tools (Sukamolson, 2007). The primary aim of quantitative research, according to Sukamolson, is to provide a broad view of the “truth” embedded within datasets representing the population.

Albers (2017) cautions against reducing quantitative analysis to the determination of a p-value alone. Instead, analysis should clarify relationships within the dataset and contribute meaningfully to the research context. He argues that equating “data analysis” with “p-value calculation” is overly simplistic and stresses the importance of considering practical implications supported by empirical evidence (Albers, 2017, p. 228). Figure 15 illustrates the cyclical nature of data analysis.

Figure 15. Data Analysis Process



Source: Albers (2017, p. 222)

Initial data examination was conducted using descriptive analysis, which provides a summarised view of specific characteristics of variables or measurements (Cooksey, 2020). Descriptive statistics offer insights into data distribution, identify outliers, and highlight consistent values across groups (Albers, 2017). Cooksey further notes that descriptive analysis enables interpretation, reveals trends or patterns, and informs subsequent analytical decisions.

Exploratory analysis is described by Haig (2005, p. 375) as “detective work designed to reveal the structure or patterns in the data.” Jebb, Parrigon and Woo (2017) argue that exploratory data analysis enhances the validity of conclusions within the scientific community but should be complemented by confirmatory analysis to substantiate findings. Confirmatory analysis, grounded in deductive theory, provides stronger validation and reduces the likelihood of chance results.

Statistical analysis begins with descriptive statistics to organise, simplify, and summarise data (May, 2017). Beyond descriptive measures, the study incorporated reliability, and validity checks for the scales used.

Validity refers to “whether an instrument is indeed measuring what it purports to evaluate” (Raykov and Marcoulides, 2011, p. 183). Reliability was assessed using Cronbach’s alpha (Cronbach, 1951), a widely adopted index of internal consistency. Higher covariance among scale items typically results in a higher alpha value (Rammstedt and Beierlein, 2014). However, Cronbach’s alpha has been criticised for being a lower bound estimate of reliability and for its sensitivity to measurement error (Sijtsma, 2009). Despite these limitations, Taber (2018) reports that Cronbach’s alpha was employed in 69 articles across four leading science education journals in 2015, underscoring its continued relevance in research practice).

3.10.2 Analysis Strategy

Data analysis is a critical component of any research study, as it reveals relationships within the data and provides insight and relevance to the findings (Albers, 2017). Albers further argues that data analysis addresses the fundamental questions of “who cares” and “what is really happening” in the context of the study.

For quantitative research, data analysis typically involves statistical techniques designed to address research questions or hypotheses (Soiferman, 2010). Creswell (2009) distinguishes between two types of statistical analysis:

- Descriptive analysis, which summarises central tendencies (mean, mode, median) and measures of variability (variance, standard deviation, range).
- Inferential analysis, which tests hypotheses and examines relationships between independent and dependent variables under controlled conditions.

The approach adopted in this study is outlined below.

Preliminary Data Checks

The initial stage involved examining data for normality and linearity (Field, 2005). Outliers were assessed first, as they can inflate error rates and distort statistical tests (Zimmerman, 1995). Frequency tables were used to detect distribution patterns, followed by boxplots to identify potential outliers (Loureiro, Melo and Bressane, 2023). No outliers were detected. Normality tests confirmed that all datasets were normally distributed, allowing for the use of parametric tests. Results are presented in Section 4.0 (Findings).

Data was also checked for errors or omissions. Open-ended questions exhibited incomplete responses:

- Malaysian leaders: 15% incomplete for “What are the core values that drive your behaviour?”; 78% provided one- to three-word answers for “What is one way you would instil your core values in your staff?”; and 73% for “Think of a time you had to change the way of working in the company. What is one way you ensured your staff adopted the change?”
- UK leaders: 35%, 79%, and 52% respectively for the same questions.

Descriptive Statistics

Descriptive statistics were used to profile the demographic characteristics of leaders and followers in both cultural contexts. These statistics provide an overview of the dataset and form the foundation for further analysis (Woodrow, 2014). Woodrow notes that descriptive analysis also facilitates replication in future studies.

Inferential Tests

The following tests were conducted:

1. Mean scores for personal values, authentic leadership, and entrepreneurial leadership were calculated for each country and study (Level 2 aggregation).
2. Tested the relationship between authentic leadership and personal values.
3. Examined the impact of personal values on entrepreneurial leadership.
4. Analysed combined effects of personal values on both authentic and entrepreneurial leadership.

Analyses were performed using SPSS and Jamovi software.

Treatment of Likert Data

Boone and Boone (2012) emphasise that Likert-scale data requires careful interpretation, as ordinal items imply a “greater than” relationship. Recommended analyses include chi-square, Kendall Tau B, and Kendall Tau C. Conversely, Norman (2010) argues that parametric tests can be applied to Likert data under conditions of small sample sizes, unequal variances, and non-normal distributions, citing consistency in literature spanning nearly 80 years. Correlation analysis employed Pearson’s coefficient, the most widely used method for assessing relationships between variables (Khalid, Hilman and Kumar, 2012).

Reliability Testing

Reliability was assessed using Cronbach’s alpha, which measures internal consistency across scale items. This coefficient was applied to all variables in the questionnaire to ensure robustness.

3.10.2.1 Factor Analysis

Factor analysis is a statistical technique used to reduce a large set of related variables into a smaller number of factors that explain underlying patterns or phenomena (Rietveld and Van Hout, 1993). This is achieved by grouping similar variables into common factors to identify latent constructs (Shrestha, 2021). The primary aim of factor analysis is to explain covariation among variables through linear dependency (Cattell, 1988), thereby clarifying relationships between scale items and their shared factors (Tavakol and Wetzel, 2020).

Two widely used extraction methods are Common Factor Analysis and Principal Component Analysis (PCA).

- Common Factor Analysis distinguishes between common variance (shared among observed variables measuring a latent factor) and unique variance (measurement error associated with each observed variable).
- Principal Component Analysis (PCA), often the default in many software packages (Thompson, 2004), assumes no unique variance or measurement error (de Winter and Dodou, 2015; Knekta, Runyon and Eddy, 2019). PCA is frequently used in cross-cultural studies (Prince, 2008), but its limitations include a lack of focus on latent constructs. Studies comparing PCA and common factor analysis (McCloy et al., 1938; de Winter and Dodou, 2015) found PCA loadings to be higher, concluding that common factor analysis better represents latent structures. Widaman (1993) and Howard (2016) caution against using PCA for exploratory factor analysis (EFA), citing its mathematical basis and disregard for common variance.

Rotation Methods

Rotation enhances interpretability by maximising variable loadings on extracted factors while minimising loadings on others (Field, 2005). Two rotation categories exist:

- Orthogonal rotation (e.g., Varimax) assumes factors are uncorrelated and supports replicability.
- Oblique rotation (e.g., Promax) allows correlated factors but can be harder to interpret and prone to overfitting (Kieffer, 1998).

Varimax is the most widely used orthogonal method, as it produces clear high and low loadings for each factor (Yang, 2005). Nevertheless, this study employs oblimin rotation, an oblique method, as theoretical considerations and empirical evidence suggest that the underlying constructs are likely correlated, making oblique rotation more appropriate for achieving a realistic representation of factor relationships (Costello and Osborne, 2005).

Determining the Number of Factors

Several methods guide factor retention:

1. Kaiser's criterion (eigenvalues > 1) (Kaiser, 1960), though criticised for overestimating factors in small samples (Horn, 1965; Costello and Osborne, 2005).
2. Scree plot (Cattell, 1966), which identifies the point where eigenvalues level off.
3. Statistical significance tests (Lawley, 1940), influenced by sample size.
4. Variance explained, retaining factors contributing to 70% of total variance.

Parallel analysis, based on Monte Carlo simulation, is considered one of the most robust methods (Hayton, Allen and Scarpello, 2004; Taherdoost, Sahibuddin and Jalaliyoon, 2014), though many software implementations favour PCA over common factor analysis (Iacobucci et al., 2022).

Maximum Likelihood Method

The maximum likelihood approach estimates factor loadings and variances under assumptions of unique variance, multivariate normality, and linear relationships. It also facilitates confirmatory factor analysis (CFA) for model fit testing (Howard,

2016). Howard recommends maximum likelihood for studies requiring model fit indices.

Factor Loadings and Sampling Adequacy

Factor loading represents the correlation between an item and its corresponding factor (Tavakol and Wetzel, 2020). The strength of a factor is determined by the number of loadings not equal to zero, with maximum strength achieved when the loading equals 1 (Bailey, Kapetanios and Pesaran, 2021). Hair et al. (1995) provide guidance on interpreting loadings:

- ≥ 0.50 : Practical significance
- ≥ 0.40 : Important
- ≥ 0.30 : Minimal

Loadings below 0.30 should be reconsidered, as they may indicate the need to revisit factor analysis although alternative thresholds of 0.32 or 0.40 are also cited in literature (Costello and Osborne, 2005). High loadings inform item retention and reveal internal structure, while communalities, the sum of squared loadings for an item, indicate the proportion of variance explained by factors (Tavakol and Wetzel, 2020). Higher communalities suggest stronger factor representation.

KMO and Bartlett's Test

The Kaiser-Meyer-Olkin (KMO) measure assesses sampling adequacy, while Bartlett's test of sphericity evaluates whether the correlation matrix is an identity matrix (Howard, 2016). A significant Bartlett's test combined with a KMO value above 0.60 indicates suitability for exploratory factor analysis (Netemeyer, Bearden and Sharma, 2003). Hair et al. (2010) recommend a higher threshold of 0.70 for robust factor loading.

Distribution Checks and Over-Factoring

Factors represent latent characteristics inferred from observed variable scores (Watkins, 2018). Distribution symmetry and shape are assessed via skewness and kurtosis, with concerns arising when skew ≥ 2.0 or kurtosis ≥ 7.0 (Curran, West and

Finch, 1996). In such cases, alternative methods such as Spearman or polychoric correlations are recommended (de Winter and Dodou, 2015).

Over-factoring, extracting more factors than necessary, has less impact than under-factoring, which risks combining distinct factors (Watkins, 2018). Residual matrices help detect additional factors, with residuals ≥ 0.10 suggesting further extraction (Cudeck, 2000). Watkins proposes that each factor should:

- Include at least three variables
- Avoid cross-loadings
- Demonstrate internal reliability ≥ 0.70
- Be supported by theoretical justification (Marsh, Hau and Wen, 2004).

Factor Scores

Factor scores represent individual placement on a factor and are useful for subsequent analyses (DiStefano, Zhu and Mîndrilă, 2009). Two approaches exist:

- Non-refined methods:
 1. Sum scores by factor (adjusting for negative loadings)
 2. Sum scores above a cut-off (commonly 0.30)
 3. Sum standardised scores (for variability in SD)
 4. Weighted sum scores (items weighted by loading magnitude)
- Refined methods:
 1. Regression scores: Predict individual placement using Thurstone's least squares approach
 2. Bartlett scores: Computed using inverse diagonal matrices and factor pattern loadings; advantage lies in unbiased estimates via maximum likelihood
 3. Anderson-Rubin scores: Adjusted least squares ensuring orthogonality among factors.

Table 21. Various Methods of Factor Scores

Method	Procedure	Advantages	Considerations
Regression Scores	Multiple regression used to estimate (predict) factor scores. Default procedure to compute factor scores in SAS and SPSS packages; also available in R.	Factor scores are standard scores with a Mean =0, Variance = squared multiple correlation (SMC) between items and factor. Procedure maximizes validity of estimates.	Factor scores are neither univocal nor unbiased. The scores may be correlated even when factors are orthogonal.
Bartlett	Method of producing factor scores is similar to regression method but produces estimates that are most likely to represent the true factor scores. Can be computed using SPSS or R statistical packages.	Factor scores are standard scores (Mean =0, Variance = SMC) produces unbiased estimates. In an orthogonal solution, factor scores are not correlated with other factors (univocality). Procedure produces high validity estimates between the	The scores may be correlated even when factors are orthogonal.

		factor scores and factor.	
Anderson-Rubin	Method of producing factor scores is similar to Bartlett but allows factor scores to be uncorrelated when factors are orthogonal. Can be computed using SPSS.	Factor scores have a mean of 0, have a standard deviation of 1. When the factors are orthogonal, factor scores are uncorrelated as well (correlational accuracy). Factor scores have reasonably high correlations with their estimated factor (validity).	Factor scores may be correlated with the other orthogonal factors (i.e., not univocal). Factor scores are not unbiased.

Source: DiStefano, Zhu and Mîndrilă (2009, p. 9)

Model Fit Indices and Considerations

Hu and Bentler (1999, p. 2) describe the Chi-Square (χ^2) test as assessing “the magnitude of discrepancy between the sample and fitted covariance matrices.” It evaluates the difference between observed and expected covariance matrices (Gunzler and Morris, 2016) under the null hypothesis of perfect model fit (Clark and Bowles, 2018). However, χ^2 is highly sensitive to sample size, where minor misfits can produce significant results (Browne and Cudeck, 1993).

The Goodness-of-Fit Index (GFI) measures the proportion of variance explained by the estimated covariance matrix (Tabachnick and Fidell, 2007). While GFI should ideally remain unaffected by factor loadings and unique variances in confirmatory factor analysis (CFA), Shevlin and Miles (1998) argue that emphasis should be placed on theoretical justification rather than perfect fit.

Root Mean Square Error of Approximation (RMSEA) evaluates how well a hypothesised model approximates a perfect model, expressed as the square root of population misfit per degree of freedom (Steiger and Lind, 1980). Lower RMSEA values indicate better fit, with thresholds of ≤ 0.08 considered satisfactory and ≤ 0.05 excellent (Browne and Cudeck, 1993). Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) compare the hypothesised model to a baseline model, with recommended cut-offs of ≥ 0.95 (Marsh, Hau and Wen, 2004). Garrido, Abad and Ponsoda (2016) found CFI and TLI to outperform other indices in terms of reliability.

The Standardised Root Mean Square Residual (SRMR) represents the square root of the difference between residuals of the sample and hypothesised covariance matrices (Hooper, Coughlan and Mullen, 2008). SRMR is particularly useful for small samples and provides confidence intervals for interpretation (Pavlov, Maydeu-Olivares and Shi, 2020). Recent studies advocate SRMR as a robust indicator of close fit (Shi, Maydeu-Olivares and Rosseel, 2019; Ximénez et al., 2022).

Cross-Loadings and Factor Stability

Cross-loadings occur when an item loads significantly on more than one factor (Rao, 1997), potentially destabilising factor structures and influencing eigenvalues, CFI, and TLI outcomes (Li et al., 2020). While RMSEA offers greater reliability under cross-loading conditions, it may reduce accuracy. Mitigation strategies include improving item design to maximise primary loadings, increasing sample size, and testing for multivariate normality (Li et al., 2020).

Over-Factoring and Model Fit

Over-factoring refers to extracting more factors than necessary, can distort interpretation. Preacher and MacCallum (2003) caution against reliance on Kaiser's eigenvalue > 1 rule, which often leads to over-factoring. Clark and Bowles (2018) recommend using model fit indices such as χ^2 , RMSEA, CFI, and TLI to address both over- and under-factoring when continuous data are analysed.

Weighted Least Squares

When surveys involve unequal probability sampling, estimates may become inconsistent. In such cases, Weighted Least Squares (WLS) is advantageous, particularly when maximum likelihood estimation is applied without predetermined variance assumptions (Magee, 1998; Kiers, 1997).

Sample Size and Suitability for Factor Analysis

A sample size between 100 and 200 is generally considered sufficient for factor analysis, provided variable communalities exceed 0.50 (Mundfrom, Shaw and Ke, 2005). Hair et al. (2016) emphasise that all variables should be examined to identify patterns or factors, with each factor representing a linear combination of variables.

Suitability for factor analysis was assessed using:

- Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, with acceptable values ranging from 0.60 to 0.70 (Netemeyer, Bearden and Sharma, 2003).
- Bartlett's Test of Sphericity, which should yield a significant result to confirm factorability (Taherdoost, Sahibuddin and Jalaliyoon, 2014).

Hair et al. (2010) recommend factor loadings of ≥ 0.70 for robust interpretation. To enhance interpretability, factor rotation was applied using an orthogonal solution.

Reliability and ANOVA

Field (2005) suggests that a factor is reliable if it includes four or more loadings of ≥ 0.60 , regardless of sample size. For hypothesis testing, factorial ANOVA was selected with a multivariate option (rather than univariate) due to correlations among variables. Levene's Test for Equality of Variances was applied in independent t-tests to examine differences across country, gender, and age groups (age categorised as 20–30 and 31–40).

Multivariate Techniques: EFA and SEM

The multivariate nature of the data necessitated the use of Exploratory Factor Analysis (EFA) and Structural Equation Modelling (SEM) based on covariance structures.

- EFA served as the initial step to develop a psychometrically sound, multidimensional measure and reduce observed variables to a smaller set representing latent constructs (Van Dierendonck and Nuijten, 2011).
- SEM, incorporating Confirmatory Factor Analysis (CFA), tested whether constructs influenced responses as predicted (DeCoster, 1998). Both EFA and CFA require relatively large sample sizes for robust estimation (Kline, 2016; Alavi et al., 2020).

3.10.2.2 Exploratory Factor Analysis and Confirmatory Factor Analysis

This study employs a two-step factor analytic approach, beginning with Exploratory Factor Analysis (EFA) and followed by Confirmatory Factor Analysis (CFA). This sequential design enables an initial exploration of the latent structure without imposing a priori constraints, followed by rigorous testing of the hypothesised model (Goretzko, Pham, and Bühner, 2021). EFA was conducted to uncover the underlying factor structure of the dataset. As a data-driven technique, EFA is particularly effective in early research stages where the dimensionality of constructs requires clarification (Yu et al., 2015; Orçan, 2018). It identifies patterns among observed variables, providing a foundation for subsequent CFA (Nájera, Abad and Sorrel, 2025). CFA was then applied to validate the factor structure derived from EFA, testing the hypothesised model against observed data to ensure adequate fit (Rogers, 2024). Literature underscores the importance of this sequential approach, noting that EFA offers flexibility in identifying latent structures, while CFA ensures robustness and validity (Goretzko, Pham and Bühner, 2021; Nájera, Abad and Sorrel, 2025).

EFA involves assessing the relationship between each indicator and its corresponding factor, facilitating meaningful interpretation (Howard and O'Sullivan, 2024). Factor retention decisions were guided by established criteria,

including a three-factor approach based on substantive theory, ensuring interpretability and construct validity (Sellbom and Goretzko, 2023). Oblimin rotation was applied to achieve a simpler, interpretable structure. Factor loadings were then examined to interpret each factor, grouping items with high loadings on the same dimension. Internal consistency was assessed using Cronbach's alpha.

For parameter estimation, Maximum Likelihood Estimation (MLE) was employed due to its efficiency and theoretical advantages. MLE identifies parameter values that minimise discrepancies between predicted and observed outcomes (Myers, Interian, and Moustafa, 2022). This approach avoids computing normalising constants and reduces computational burden through weighting functions (Huser and Wadsworth, 2020). Berg (2005) highlights two key benefits: convergence to true parameter values under correct model specification and suitability for complex multi-equation models. Despite requiring strong distributional assumptions, these advantages outweigh limitations, making MLE a preferred method in quantitative research. Turkson, Ayiah-Mensah, and Nimoh (2021) affirm that MLE yields estimators that are consistent, asymptotically efficient, and asymptotically normal. Abdul Sahib (2023) further notes its efficiency, asymptotic normality, consistency, flexibility across models, and compatibility with optimisation algorithms such as Newton-Raphson and Expectation-Maximisation.

Varimax rotation simplifies interpretation by maximising the variance of squared loadings within factors, thereby facilitating the identification of variables most strongly associated with each factor (Tabachnick and Fidell, 2019). This orthogonal rotation method assumes that factors are uncorrelated, making it appropriate when theoretical frameworks or prior research suggest independence among constructs (Howard and O'Sullivan, 2024). By producing a simpler factor structure, Varimax enhances interpretability, as variables tend to load highly on a single factor and minimally on others (Radomska et al., 2024). This redistribution of variance across factors reduces the likelihood of cross-loadings, thereby improving clarity and aiding the alignment of components with scientifically meaningful categories (Rohe and Zeng, 2023; Field, 2018).

Varimax frequently increases factor loading variance, accentuating differences between small and large loadings, which results in clearer factor structures (Howard & Henderson, 2023). This principle is supported by Letchumanan et al. (2022), who note that Varimax maximises the overall variance of the factor matrix's loadings, providing a distinct separation of factors. Scharf and Nestler (2019) further contend that Varimax is valid in contexts where factors do not overlap, as it reduces biases associated with temporal overlap. Its widespread use across disciplines, including social sciences, underscores its credibility and methodological robustness (Maskey, Fei, and Nguyen, 2018; Acal, Aguilera and Escabias, 2020; Rogers, 2021; Weide and Beauducel, 2019). Consequently, Varimax remains one of the most frequently applied rotation methods in exploratory factor analysis, offering a balance of simplicity and interpretability.

Alternatively, Howard and Henderson (2023) emphasise that oblique rotations, such as oblimin, allow extracted factors to correlate while maintaining the integrity of those correlations, thereby reflecting the complexity of psychological and social constructs more accurately than orthogonal approaches. This flexibility is particularly important because empirical evidence suggests that latent dimensions in behavioural and organisational research are rarely independent (Field, 2005). Scholars increasingly advocate for oblique methods as best practice when theoretical or empirical grounds indicate inter-factor relationships (Nguyen and Waller, 2022). Among oblique techniques, direct oblimin remains the most widely applied due to its ability to produce interpretable solutions that approximate varimax loadings while permitting factor correlation—a feature that enhances construct validity and aligns with real-world data structures (Wu, Liao and Li, 2025; Beauducel and Hilger, 2023). The primary purpose of rotation is to achieve simple structure by minimising cross-loadings, ensuring that indicators load strongly on a single factor (Costello and Osborne, 2005). Oblimin rotation accomplishes this while accommodating correlations among factors, which is critical for scales measuring multidimensional phenomena such as competencies or attitudes (Akhtar-Danesh, 2023). Recent simulation studies confirm that oblimin performs robustly across varying sample sizes and correlation

magnitudes, reducing bias in factor inter-correlations compared to alternative methods (Nguyen and Waller, 2023). Gültekin and Çetin (2025) further argue that oblimin adapts effectively to mutuality among factors, thereby improving interpretability without sacrificing statistical precision. In this study, oblimin rotation was employed because factor correlation coefficients exceeded 0.30, consistent with Tabachnick and Fidell's (2007) recommendation that such thresholds indicate a non-orthogonal structure requiring oblique rotation. This decision aligns with contemporary methodological guidance that prioritises theoretical coherence and empirical fit over rigid orthogonality (Howard and Henderson, 2023; Beauducel and Hilger, 2023).

Confirmatory Factor Analysis (CFA) was conducted to validate the hypothesised factor structure derived from the exploratory phase. CFA specifies which observed variables load onto which latent factors based on EFA results, ensuring theoretical and empirical coherence. Model identification was achieved by confirming that sufficient data points were available to estimate all parameters. Model fit was evaluated using widely accepted indices, including Chi-square, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker–Lewis Index (TLI). A good model fit indicates that the hypothesised structure aligns with the observed data. Where necessary, model refinement was guided by fit indices and modification indices, with adjustments implemented only when theoretically justified.

CFA provides detailed diagnostic outputs, such as residual covariance matrices and modification indices, which highlight unmodelled relationships and suggest potential improvements (Howard et al., 2025). This technique is widely applied for developing and refining measurement instruments, assessing construct validity, detecting method effects, and evaluating factor invariance across time and groups (Jackson, Gillaspay, and Purc-Stephenson, 2009). To ensure replicability, EFA was initially performed on the dataset, followed by CFA to verify whether the number of factors, variance explained, factor loadings, and factor correlations were consistent with theoretical expectations and previous findings (Van Prooijen and Van Der Kloot, 2001).

Exploratory Factor Analysis (EFA) was employed to examine the initial dimensionality of the collected items, as recommended by Worthington and Whittaker (2006). Dimensionality refers to the underlying common factors that account for the correlations among observed variables (Slavec & Drnovšek, 2012). EFA also enables the assessment of factor loadings and model fit indices. To determine the suitability of the data for factor analysis, the Kaiser–Meyer–Olkin (KMO) measure and Bartlett’s Test of Sphericity were applied (Zhang, Zang and Zhang, 2021).

A two-step analytical process was adopted. In the first step, EFA was conducted separately for each country to establish the dimensional structure of the items. The second step involved Confirmatory Factor Analysis (CFA) to validate the factor loadings for Authentic Leadership (ALS), Entrepreneurial Leadership (ELS), and Personal Values (VAL) within each national sample.

The use of both EFA and CFA is consistent with prior research. For example, Renko et al. (2015) validated the ENTRELEAD scale through two studies: Study 1 utilised data from 367 participants across three American universities, while Study 2 involved 208 respondents from American and Finnish companies. EFA with principal component analysis and oblimin rotation was applied to determine factor structure, followed by reliability testing using Cronbach’s alpha and CFA for confirmation. Construct validity was assessed using goodness-of-fit indices, including χ^2 , CFI, TLI, and RMSEA. The authors acknowledged limitations such as reliance on cross-sectional data and self-assessment measures, which the current study addresses by incorporating additional validation steps.

Similarly, Walumbwa et al. (2008) employed CFA to validate the Authentic Leadership Questionnaire (ALQ) across samples from China, Kenya, and the United States, highlighting the importance of measurement invariance in cross-cultural research. Long and Flake (2023) further emphasise that multiple-group CFA is essential for ensuring impartiality in factor structure, loadings, intercepts, and residual variances. Model fit in these studies was evaluated using indices such as CFI, RMSEA, SRMR, and chi-square difference tests. Marsh et al. (2014)

argue that CFA facilitates the examination of relationships between latent constructs after accounting for measurement error, while Spector, Liu and Sanchez (2015) note the relevance of intraclass correlation coefficients (ICC) in multilevel studies involving cultural comparisons.

Other studies, such as Pfeiffer, Pereira and Lisboa (2022), adopted EFA with polychoric correlation matrices and unweighted least squares extraction, followed by parallel analysis to prevent factor overestimation, and subsequently confirmed findings through CFA on an independent sample. Their results suggest that authentic leadership components can be generalised across cultures, although they acknowledge limitations such as the absence of context-driven variables and mixed-method approaches. Likewise, Cervo et al. (2016) validated the ALQ across Brazilian and Portuguese samples (N=1,019 and N=842, respectively) using multi-group CFA and measurement invariance testing, comparing fit indices such as CFI, RMSEA, and SRMR, which are less sensitive to sample size (Chen, 2007).

Personal values have also been extensively validated using CFA. Schwartz and Boehnke (2004) tested the ten basic values across 27 countries (N=10,857), while Cieciuch et al. (2014) employed a third-order CFA model across nine countries (N=3,261), confirming the hierarchical structure of value dimensions. These studies underscore the importance of rigorous construct validation across cultural contexts.

In line with these precedents, the current study utilised validated instruments: Walumbwa et al.'s (2008) ALQ, Renko et al.'s (2015) ENTRELEAD scale, and Sagiv and Schwartz's (2022) personal values framework. However, as Knekta, Runyon and Eddy (2019) argue, validity pertains to the interpretation of scores within a specific context rather than the instrument itself, necessitating further testing for new samples and settings.

Prior to conducting EFA, data screening was performed following DiStefano and Hess (2005) to identify outliers, missing values, and errors. In Study I, no outliers were detected; however, items related to leadership influence and technology-based engagement were removed due to incomplete responses and limited

relevance. After item removal, 34 items remained for analysis. Independent t-tests and Levene's test were subsequently conducted to assess discriminative power and variance homogeneity between the two national samples.

Reliability and Sample Adequacy

Cronbach's alpha (Cronbach, 1951) was employed to assess internal consistency, a widely used reliability measure based on the assumption that all items reflect the same underlying construct (Knekta, Runyon and Eddy, 2019). For Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM), a minimum sample size of approximately 200 is generally recommended (Boomsma and Hoogland, 2001; Soares et al., 2012). This threshold is supported by prior studies, such as Balogun, Mahembe and Allen-Ile (2020), who utilised 213 respondents in a Nigerian context, and Walumbwa et al. (2008), who validated the ALQ using samples of 224 (U.S.) and 212 (China).

For the present study, the Malaysian sample (N = 139) and the UK sample (N = 210) were randomly split into two halves, following Lorenzo-Seva's (2022) recommendation. This approach allows one subset to be used for EFA and the other for CFA, thereby reducing bias and enhancing construct validity (Orçan, 2018; Brown, 2006; Izquierdo, Olea and Abad, 2014). Lorenzo-Seva (2022) further argues that comparable sources should be used rather than entirely different datasets to maintain consistency. While Schmitt et al. (2018) contend that EFA and CFA can be performed on the same dataset, particularly when CFA model fit is poor, the current study adheres to the two-step approach: EFA to generate a hypothesised factor structure, followed by CFA to test its validity. Sample splitting was verified through correlation matrix analysis and KMO values, ensuring sampling adequacy. A KMO value approaching 1 indicates that the sum of partial correlations is minimal compared to the sum of correlations among observed variables, thereby supporting factor reliability (Lorenzo-Seva, 2022, p. 2666).

Factor Analysis and Model Estimation

CFA assumes that all latent variables are exogenous and that each observed variable comprises both a latent component and a unique error term (Kang and Ahn, 2021; de Winter and Dodou, 2015). Maximum Likelihood (ML) estimation was employed under the assumption of multivariate normality, while Weighted Least Squares (WLS) is generally recommended for non-normal or ordinal data (Schermele-Engel, Moosbrugger and Müller, 2003). Model fit was assessed using the Root Mean Square Error of Approximation (RMSEA) for approximate fit and parsimony indices to evaluate potential overfitting. Parsimonious fit was determined using the χ^2/df ratio, consistent with Renko et al. (2015). Bartlett's Test of Sphericity was applied to test the null hypothesis of an identity matrix, and factor retention was guided by the scree plot criterion.

Table 22. Factors that Determine Sample Size (SEM and CFA)

SEM and CFA
Model Complexity or/and number of model parameters estimated
Analyses in which all outcome variables are continuous
Normally distributed data, and there are no
Linear effects existing in data
Existing interactions between data
Estimation method
The lower the reliability of the scores the higher the required sample size
Is it a latent variable model or observed variable model?
Less precise data requires larger samples
Missing data require larger sample sizes
CFA in particular
Low number of indicators for the constructs of interest per factor requires larger samples
Lower number of indicators per factor requires larger samples
Indicators that convey highly with multiple factors require larger samples
If the number of factors is high a larger sample is needed

If covariances between factors are low a larger sample is needed
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Source: Adapted from Kline (2016)

A fundamental requirement in Structural Equation Modelling (SEM) is the inclusion of at least three observed indicators per latent factor to ensure model identification and stability (Koran, 2020). MacCallum and Austin (2000) suggest that a median sample size of approximately $N = 200$ is generally sufficient for SEM, provided the model is not overly complex and the data do not exhibit severe non-normality. Sample size also influences the performance and interpretation of fit indices, particularly the Root Mean Square Error of Approximation (RMSEA), as its confidence intervals are sensitive to sample size variations (Kyriazos, 2018).

Hu and Bentler's (1999) seminal work established widely accepted cut-off values for model fit: Standardised Root Mean Square Residual (SRMR) ≤ 0.08 , RMSEA ≤ 0.06 , and Comparative Fit Index (CFI) ≥ 0.95 . These thresholds continue to guide best practice in SEM applications.

Reliability within SEM is often assessed using Cronbach's alpha (Cho, 2016); however, Cheung et al. (2023) argue that construct reliability, frequently estimated using McDonald's omega, provides a more accurate measure as it does not assume equal factor loadings across items. Construct reliability is derived from the CFA model itself, offering a more robust assessment of internal consistency. MacCallum and Austin (2000) further note that approximately half of SEM-related studies employ nested modelling approaches, where one model's parameters are a subset of another, to evaluate incremental fit.

Construct validation in CFA follows established guidelines, such as those outlined by DiStefano and Hess (2005), which were applied in this study (see Table 24). Kang and Ahn (2021) recommend three to four observed indicators per latent construct, while Li (2021) suggests a range of two to five indicators as acceptable. Convergent validity is supported when items exhibit high factor loadings on their respective constructs, as initially identified during the EFA stage. Although the instruments used in this study have demonstrated reliability in previous research, CFA was conducted to confirm their suitability for the current sample, which

differs from the populations for which the scales were originally developed (Levine et al., 2006).

Despite its widespread use, CFA often fails to meet recommended guidelines for goodness-of-fit, group invariance, and factor precision (Marsh et al., 2020). These limitations are partly due to the restrictive assumption that each item loads on a single factor, which can lead to biased estimates. Nevertheless, Dunn and McCray (2020) advocate for the continued use of CFA, citing strong empirical support for correlated factor models as accurate representations of underlying measurement structures.

Finally, caution is warranted when interpreting fit index cut-offs. McNeish and Wolf (2023) argue that over-reliance on universal thresholds is problematic, as simulation studies informing these cut-offs often focus on limited model types. While Hu and Bentler's (1999) recommendations remain influential, their generalisation across diverse models is not guaranteed, underscoring the need for a nuanced interpretation of fit indices.

He and van de Vijver (2012, p. 10) outline several strategies for mitigating bias in cross-cultural research:

1. Construct Bias: This can be minimised by developing instruments concurrently across cultures, rather than adapting tools designed for a single cultural context. Independent design and administration help ensure conceptual equivalence.
2. Construct and/or Method Bias: Recommended strategies include engaging cultural and linguistic experts, employing bilingual participants, and using localised instruments such as free-response content analysis. Additional measures involve non-standardised tools and cross-cultural comparisons of nomological networks.
3. Method Bias: Mitigation approaches encompass comprehensive administrator training, detailed procedural manuals for scoring and interpretation, and the inclusion of contextual variables. Supplementary measures include collecting collateral information (e.g., test-taking

behaviours), assessing response styles, and implementing test–retest protocols or intervention studies.

4. Item Bias: Detection methods include linguistic and psychological analyses, psychometric evaluations, and error or distractor analysis. It is also advisable to document spare items within the test manual for transparency.

Assumption violations in factor analysis are particularly relevant when continuous observed variables are required for the application of a common factor model (Flora, LaBrish and Chalmers, 2012). A common issue arises when categorical variables are incorrectly treated as continuous. In such cases, unweighted least squares (ULS) estimation is preferable to principal axis factoring, as ULS minimises squared differences between observed and model-implied correlations (Flora et al., 2012). For robust factor analytic outcomes, the data must adequately summarise the relationships among observed variables, ensuring that the factor structure reflects the underlying constructs.

Table 23. CFA Construct Validation Initial Checklist

Area	Criteria	Reasoning	Current Study Responses
Background/Theoretical	Is there strong theoretical support for the model? Are models constructed from previous literature or theory? Are alternative models listed? Is a model or	CFA models should be built upon a strong theoretical base. Help readers understand how the models are constructed based upon prior research and theories.	Model built on ALQ, ENTRLEAD and Personal Values based on prior theoretical underpinnings. All three constructs were previously validated separately in previous studies.

	diagram presented?	Test competing theories or alternative perspectives. Illustrate complex relationships or large models.	Other studies involving different constructs were evaluated such as PVL model proposed incorporating all three constructs with relevant relationships.
Data Screening	Were data screening procedures used (e.g., checks for outliers, item diagnostics)? Were assumptions mentioned? Tested? Sample size used. Level of data analyzed. Fit cutoff criteria reported a priori?	Screening data help ensure that anomalies are removed or explained. Testing assumptions helps provide evidence to trust results. Sample size should be adequate based upon model size to help ensure stable results that are reflective of target population.	Data screen processes undertaken for samples in Study I and Study II. Study I data resulted in omissions and errors whereas Study II had data omissions. Sample size of 139 (MY) and 210 (UK) used based on EFA and CFA testing. Data has been tested and found to be appropriate for EFA and CFA.

		Recognize that data may not be appropriate for a given estimation technique. Fit criteria are reported a priori to give readers an idea of what to focus on when evaluating statistical fit of a model.	Fit cutoff includes values derived from RMSEA (≤ 0.60), SRMR (≤ 0.80), and CFI (≥ 0.96).
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Source: Adapted from DiStefano and Hess (2005, p. 238 – 239)

3.11 Conclusion

This chapter has presented the research philosophy, approach, design, sampling strategy, and data analysis procedures adopted in the study. A positivist paradigm was selected as the philosophical foundation, reflecting its emphasis on objectivity and methodological rigour, as supported by prior literature. Consistent with this paradigm, a deductive research approach was employed. The study utilised a case study design, incorporating convenience sampling and quantitative data collection methods.

A pilot study was conducted to refine questionnaire items prior to the main data collection. Two separate studies were then implemented using structured questionnaires:

- Study I targeted leaders in the United Kingdom and Malaysia. The instrument comprised 44 items: seven demographic questions, 16 items on authentic leadership, 10 on entrepreneurial leadership, and eight on personal values. Responses were captured using 5-point and 4-point Likert scales. Additionally, three open-ended questions and two items on technology usage were included.
- Study II focused on followers of millennial leaders in both countries, using a 43-item questionnaire. The structure mirrored Study I, with demographic questions and items on authentic and entrepreneurial leadership, as well as personal values. An additional item assessed perceptions of leader effectiveness. Unlike Study I, no open-ended questions were included, although the two technology-related items were retained.

Due to low response rates from direct outreach, data collection was outsourced to a research panel provider, resulting in 136 leader responses for Study I and 213 follower responses for Study II across both countries.

The data analysis process involved initial screening for outliers and missing values, followed by descriptive statistics. Reliability was assessed using internal consistency measures, and construct validity was examined through Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Additional analyses included correlation and covariance assessments to evaluate the robustness of the measurement instruments.

Chapter 4: Findings

4.1 Introduction

This section reviews the significant findings that are related to the study's aim. A sub-section discusses answers to the research questions and provides the basis of the main outcome of the study. The two studies are presented in separate sub-sections, and a comparative analysis is discussed at the end of the section. Key findings are either supported or contradicted by empirical studies discussed in the literature review section. The hypotheses underpinning the study are reviewed and the research questions are addressed.

4.2 Study I

The focus of Study I is on the analysis of millennial leaders' responses from the questionnaire derived from both countries. UK leaders have a total of 69 responses followed by Malaysian leaders with a total of 67 responses.

4.2.1 Descriptive Statistics

Demographic analysis is conducted to understand whether respondents are a representative sample of the targeted population (Lee and Schuele, 2010) from each country. The key demographics of leaders from both countries are displayed in Table 24.

Table 24. Demographics of UK and MY Leaders

	UK Leaders (N=69)		MY Leaders (N=67)	
	Frequency	Percent	Frequency	Percent
Age:				
20 - 25	11	15.9	16	23.9
26 - 30	20	29.0	22	32.8
31 - 35	25	36.2	14	20.9
36 - 40	13	18.8	15	22.4
Gender:				
Female	36	52.2	31	46.3
Male	32	46.4	36	53.7
Nonbinary	1	1.4	0	
Position:				
Owner/partner	9	13.0	17	25.4
Director/C-suite	9	13.0	7	10.4
Department Head	15	21.7	12	17.9
General Manager	16	23.2	17	25.4
Line Manager	8	11.6	3	4.5
Supervisor	12	17.4	11	16.4
Qualification:				
Secondary school	8	11.6	6	9.0
College or university	39	56.5	47	70.1

Post-graduate	21	30.4	14	20.9
No qualifications	1	1.4	0	
Location:				
England/West Malaysia	49	71.0	43	64.2
Wales/East Malaysia	10	14.5	24	35.8
Scotland	8	11.6		
Northern Ireland	2	2.9		

The analysis shows that UK leaders comprised of a higher percentage within the 31 to 35 age range (36%, N=25) compared to Malaysian leaders where the percentage was higher in the 26 to 30 age range (33%, N=22). Gender distribution is equally noticeable with UK leaders having higher female representation (52%, N=36) compared to the Malaysian leaders comprising majority males (54%, N=36). In relation to the positions held, the British respondents reflected department head and general manager as prominent roles (50%, N=31) whereas the Malaysian counterpart displayed owner/partner and general manager (51%, N=34) as prevalent roles in their respective companies. Both groups demonstrated high percentage of college/university qualifications (56%, N=39 for UK leaders and 70%, N=47 for Malaysian leaders) with primary geographic area located in England (71%) and West Malaysia (64%) correspondingly. The location representation is expected, given that 84% of the UK population is in England (Henderson et al., 2017) and 81% of the Malaysian population is based in West Malaysia (Department of Statistics Malaysia, 2020).

4.2.2 Reliability of Measurement Scales

Reliability of measurement scales of all constructs used in the study is an important process prior to performing any data analysis (Hair et al., 1998).

Table 25. Reliability of Leaders' Questions

	UK Leaders		MY Leaders	
Authenticity Questions	Mean	SD	Mean	SD
Question 7 (ALS_RT1)	4.19	0.879	4.15	0.821
Question 8 (ALS_RT2)	4.10	0.987	4.09	0.848
Question 9 (ALS_RT3)	4.26	0.852	4.33	0.860
Question 10 (ALS_RT4)	3.72	1.042	3.99	0.896
Question 11 (ALS_RT5)	3.45	0.963	3.51	1.035
Question 12 (ALS_IM1)	3.99	0.795	4.06	0.776
Question 13 (ALS_IM2)	4.23	0.667	4.27	0.750
Question 14 (ALS_IM3)	3.74	0.918	3.84	1.009
Question 16 (ALS_IM4)	3.96	0.915	3.94	0.952
Question 17 (ALS_BP1)	3.39	1.263	3.69	0.972
Question 18 (ALS_BP2)	4.22	0.921	4.52	0.704

Question 19 (ALS_BP3)	4.29	1.016	4.54	0.703
Question 20 (ALS_SA1)	4.28	1.069	4.42	0.700
Question 21 (ALS_SA2)	3.74	0.980	3.94	0.868
Question 22 (ALS_SA3)	3.90	0.894	4.09	0.933
Question 23 (ALS_SA4)	4.17	0.685	4.39	0.695
Entrepreneurship Questions				
Question 24 (ELS_EO1)	3.72	0.906	3.79	0.808
Question 25 (ELS_EO2)	3.67	1.146	3.76	0.923
Question 26 (ELS_EO3)	3.59	1.019	3.73	0.978
Question 27 (ELS_EO4)	3.88	0.916	3.82	0.886
Question 28 (ELS_EO5)	4.20	0.901	4.36	0.667
Question 29 (ELS_EO6)	4.01	1.007	4.25	0.766
Question 30 (ELS_CB1)	3.83	0.890	3.85	0.839
Question 31 (ELS_CB2)	3.91	0.919	3.94	0.983
Values Questions				
Question 32 (VAL_PWR)	2.48	0.584	2.99	0.590

Question 33 (VAL_ACH)	3.22	0.511	3.51	0.561
Question 34 (VAL_HDN)	2.86	0.753	3.06	0.649
Question 35 (VAL_STM)	3.04	0.716	3.34	0.509
Question 36 (VAL_SDR)	3.26	0.721	3.51	0.587
Question 37 (VAL_UNV)	2.94	0.705	3.24	0.676
Question 38 (VAL_BNV)	3.39	0.669	3.54	0.502
Question 39 (VAL_TRD)	2.91	0.818	3.30	0.652
Question 40 (VAL_CFM)	2.84	0.918	3.36	0.690
Question 41 (VAL_SEC)	3.20	0.739	3.51	0.612
Technology Questions				
Question 42 (TEC1)	3.80	1.183	4.39	0.870
Question 43 (TEC2)	3.54	1.037	3.93	0.910

Note: Four questions were not included. Question 15 has not been included as this question was utilised to gauge participants' engagement (Q15: To ensure full engagement, please select 'fairly often' for this question). Questions 44, 45 and 46 were not included as these were open-ended questions (Q44: What are the core values that drive your behaviour? (for example, Compassion, Collaboration, Innovation, Responsibility, Diversity, Integrity, Quality, Trust) up to 5 Core Values) (Q45: What is one way you would instil your core values in your staff?) (Q46: Think of a time you had to change the way of working in the company. What is one way you ensured your staff adopted the change?)

Table 25 depicts the internal reliability of the questions responded to by the leaders. Cronbach's alpha recorded a value of 0.891 for UK leaders and 0.906 for

Malaysian leaders. All the values of Cronbach's alpha in the questions and the composite reliability (CR) (Composite reliability is an indicator of the shared variance among the observed variables used as an indicator of a latent construct (Fornell and Larcker (1981)) were higher than 0.7. The research questionnaire, therefore, has good reliability according to Cronbach (1951) and Nunnally (1978), except for questions 44, 45 (technology related questions) and question 17 (participant engagement). Furthermore, the value of average variance extracted (AVE), (Average variance extracted is an indicator that measures the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error formed by factor loadings as results from estimated least squares or maximum likelihood regressions (Santos and Cirillo, 2021) which should be more than 0.5 according to Fornell and Larcker (1981), obtained more than 0.5 for all the constructs, and therefore, proper convergent reliability of the questionnaire was verified. The factor loadings of all the items were higher than 0.4, except for three items. The significance coefficient value, T, was higher than 1.96 for all the questions, except three questions identified earlier.

Table 26. ANOVA UK and MY Leaders

UK Leaders						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p-value</i>	<i>F crit</i>
Rows	36.24	68	0.533	3.705	4.25×10^{-11}	1.399
Columns (ALS, ELS, VAL)	37.81	2	18.906	131.426	1.68×10^{-32}	3.063
Error	19.56	136	0.143			
Total	93.61	206				
MY Leaders						
Rows	29.13	66	0.441	4.952	3.03×10^{-15}	1.406
Columns (ALS, ELS, VAL)	22.20	2	11.104	124.595	4.00×10^{-31}	3.064
Error	11.76	132	0.089			
Total	63.10	200				

Note: Mean squares (MS), degrees of freedom (df), sums of squares (SS). Authentic Leadership (ALS), Entrepreneurial Leadership (ELS) and Personal Values (VAL).

To assess the internal consistency of the measurement scales, Cronbach's alpha (α) was computed for each construct across the two leadership samples (UK and Malaysian leaders). Cronbach's alpha is a widely used reliability coefficient that evaluates how closely related a set of items are as a group, with values above 0.70 generally considered acceptable for research purposes (Nunnally and Bernstein, 1994).

For the UK leaders, the results indicate:

- Authentic Leadership Scale (ALS): $\alpha = 0.832$, reflecting good internal consistency.
- Ethical Leadership Scale (ELS): $\alpha = 0.820$, also indicating good reliability.
- Value-based Leadership Scale (VLS): $\alpha = 0.743$, which falls within the acceptable range, though slightly lower than the other two constructs.

For the Malaysian leaders, the reliability coefficients were:

- ALS: $\alpha = 0.844$, demonstrating good internal consistency.
- ELS: $\alpha = 0.789$, which is acceptable to good.
- VLS: $\alpha = 0.712$, meeting the minimum acceptable threshold for exploratory research.

These findings suggest that all three scales exhibit satisfactory reliability across both cultural contexts, with ALS consistently showing the highest internal consistency. The slightly lower alpha values for VLS in both samples may indicate greater heterogeneity in item responses or cultural differences in interpreting value-based leadership items. Nevertheless, all scales exceed the commonly accepted threshold of 0.70, supporting their use in subsequent analyses

Table 27. Test of Normality

Leaders		Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
UK	VAL	0.092	69	0.200	0.973	69	0.149
	ALS	0.100	69	0.085	0.971	69	0.102
	ELS	0.110	69	0.037	0.971	69	0.107
MY	VAL	0.090	67	0.200	0.979	67	0.310
	ALS	0.081	67	0.200	0.977	67	0.263

The variables are tested for normality as shown in Table 27. The Shapiro-Wilk (Shapiro-Wilk test detects variations from a normal univariate distribution) test is considered as the sample size is small, the sig. value is greater than 0.05 translating to all variables are normally distributed as none are significantly deviated. Therefore, appropriate parametric tests can be performed such as independent t-test and Pearson's correlation coefficient.

Table 28. UK Leaders Descriptives

			Statistic	Std. Error
ALS	Mean		3.9764	0.6022
	95% Confidence Interval for Mean	Lower Bound	3.8563	
		Upper Bound	4.0966	
	Skewness		-.216	.289
	Kurtosis		-.365	.570
ELS	Mean		3.8533	0.7742
	95% Confidence Interval for Mean	Lower Bound	3.6988	
		Upper Bound	4.0078	
	Skewness		-.001	.289
	Kurtosis		-.446	.570
VAL	Mean		3.0145	.04768
	95% Confidence Interval for Mean	Lower Bound	2.9194	
		Upper Bound	3.1096	
	Skewness		-.267	.289
	Kurtosis		-.169	.570

Figure 16. ALS Histogram (UK Leaders)

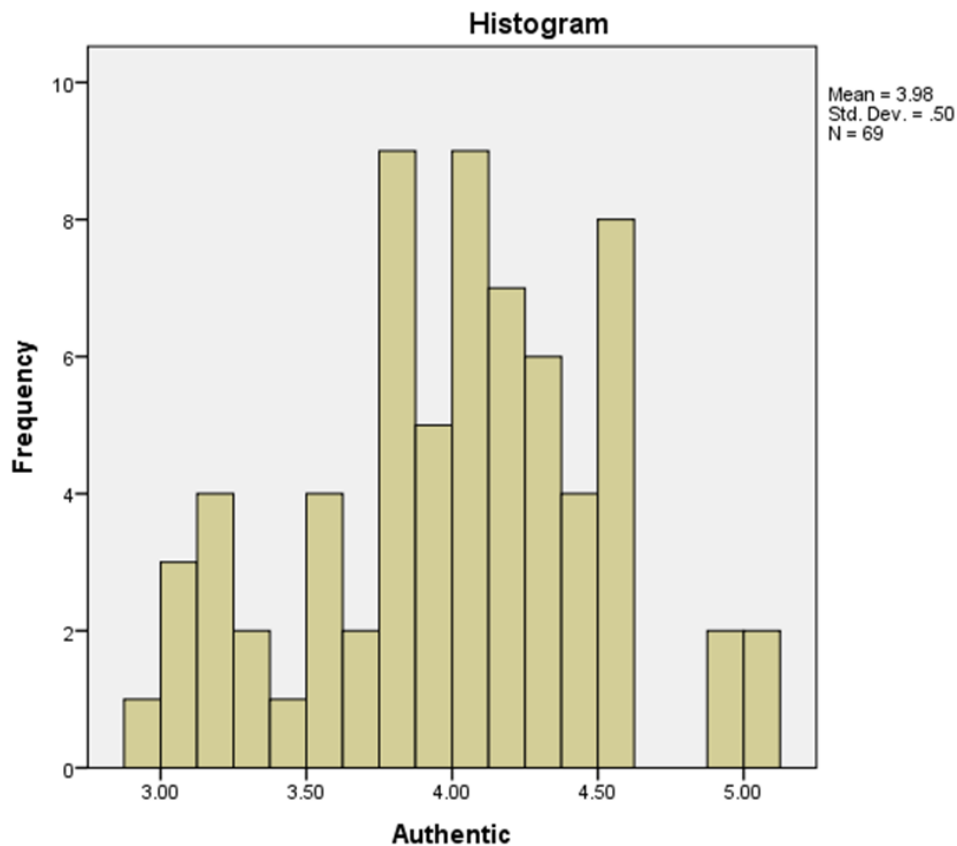


Figure 16 presents the distribution of Authentic Leadership scores for the sample (N = 69). The histogram is centered on a mean of 3.98 (SD = 0.50), indicating that respondents generally report high levels of authentic leadership behaviours. Most observations fall within one standard deviation of the mean (≈ 3.5 – 4.5), suggesting moderate dispersion with limited extremes. Visual inspection indicates no pronounced outliers; the shape appears approximately normal, though the mean's proximity to the upper end of a 5-point scale may imply a mild ceiling tendency if bins cluster near 4.5–5.0. Overall, the results imply that authentic leadership is prevalent in this cohort with some individual variability.

Figure 17. ELS Histogram (UK Leaders)

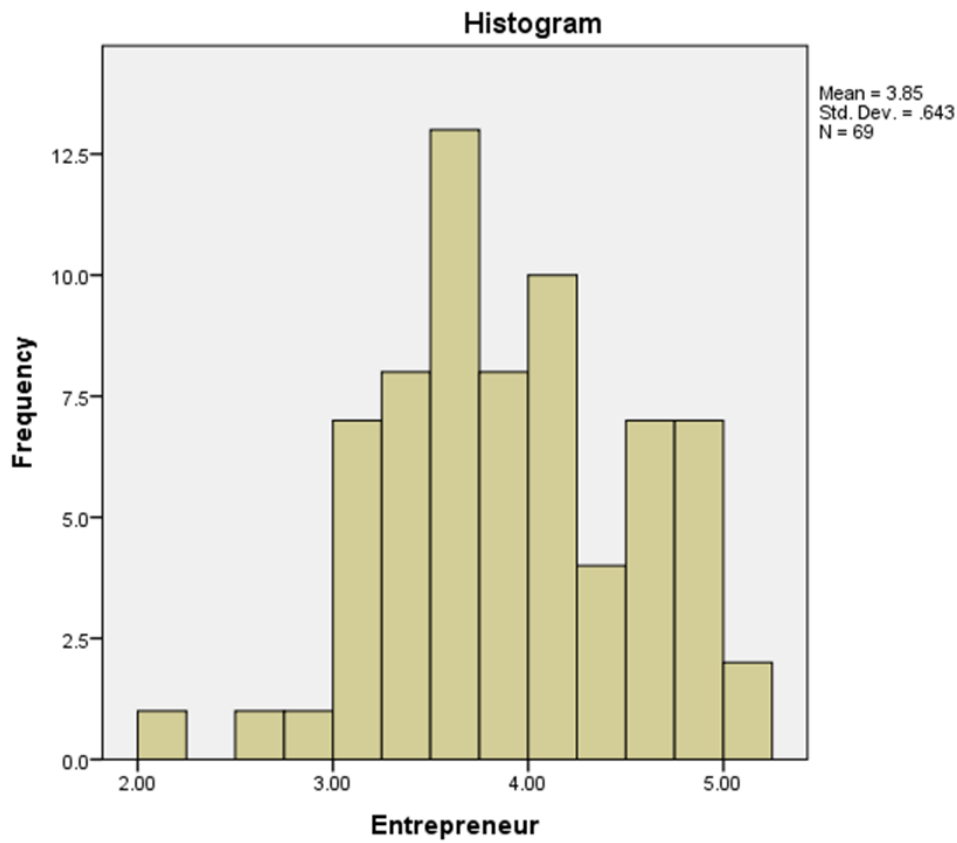
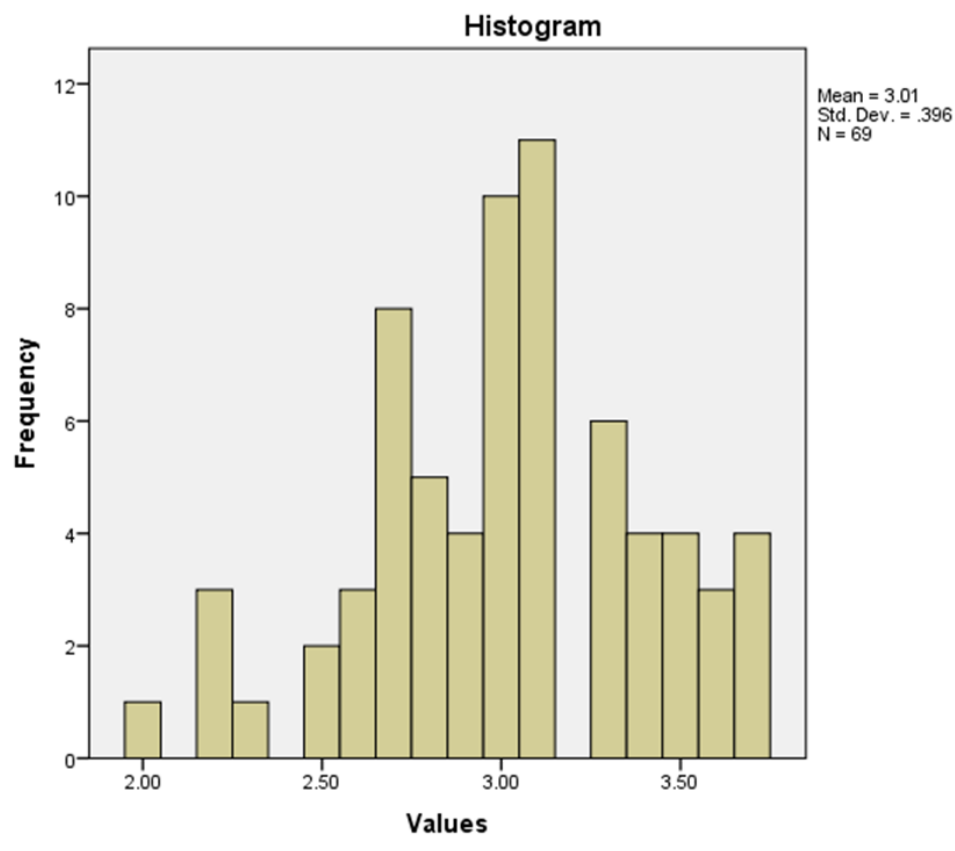


Figure 17 illustrates the distribution of entrepreneurial leadership scores for the sample (N = 69). The histogram shows a concentration of responses around a mean of 3.85, indicating that participants generally perceive themselves as demonstrating moderately high entrepreneurial leadership behaviours. The standard deviation of 0.643 reflecting greater variability in leadership perceptions among respondents. Most scores fall between 3.2 and 4.5, with few extreme values, implying that while entrepreneurial leadership is a common trait in the group, some individuals exhibit significantly stronger or weaker tendencies.

Figure 18. VAL Histogram (UK Leaders)



The histogram in Figure 18 shows a relatively symmetrical distribution centered around a mean of 3.01, with most responses clustering between 2.6 and 3.4. The standard deviation of 0.396 indicates moderate variability, suggesting that while participants generally share similar value orientations, there is some diversity in responses. The absence of extreme outliers and the bell-shaped pattern imply that the data approximate a normal distribution. These findings suggest that the group holds moderately strong personal values overall, which provides a stable basis for subsequent analyses examining relationships with behavioural outcomes.

Table 29. MY Leaders Descriptives

			Statistic	Std. Error
ALS	Mean		4.1091	.05697
	95% Confidence Interval for Mean	Lower Bound	3.9954	
		Upper Bound	4.2229	
	Skewness		-.425	.293
	Kurtosis		-.039	.578
ELS	Mean		3.9384	.06690
	95% Confidence Interval for Mean	Lower Bound	3.8049	
		Upper Bound	4.0720	
	Skewness		-.069	.293
	Kurtosis		-.461	.578
VAL	Mean		3.3343	.03907
	95% Confidence Interval for Mean	Lower Bound	3.2563	
		Upper Bound	3.4123	
	Skewness		.064	.293
	Kurtosis		-.145	.578

Figure 19. VAL Histogram (MY Leaders)

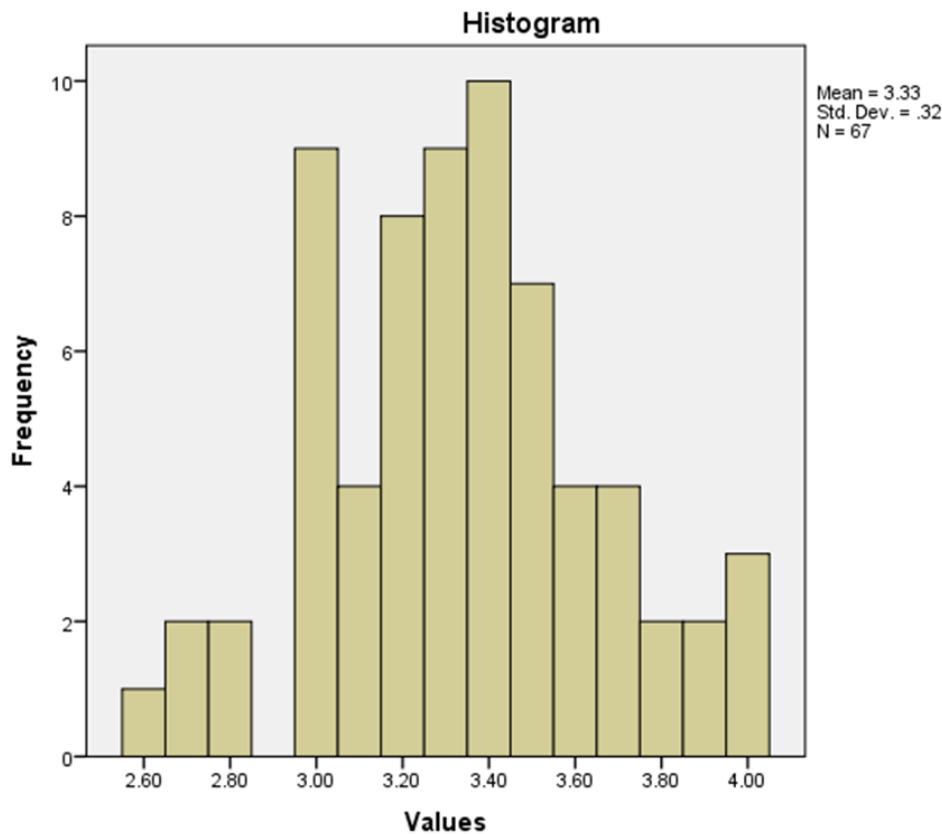
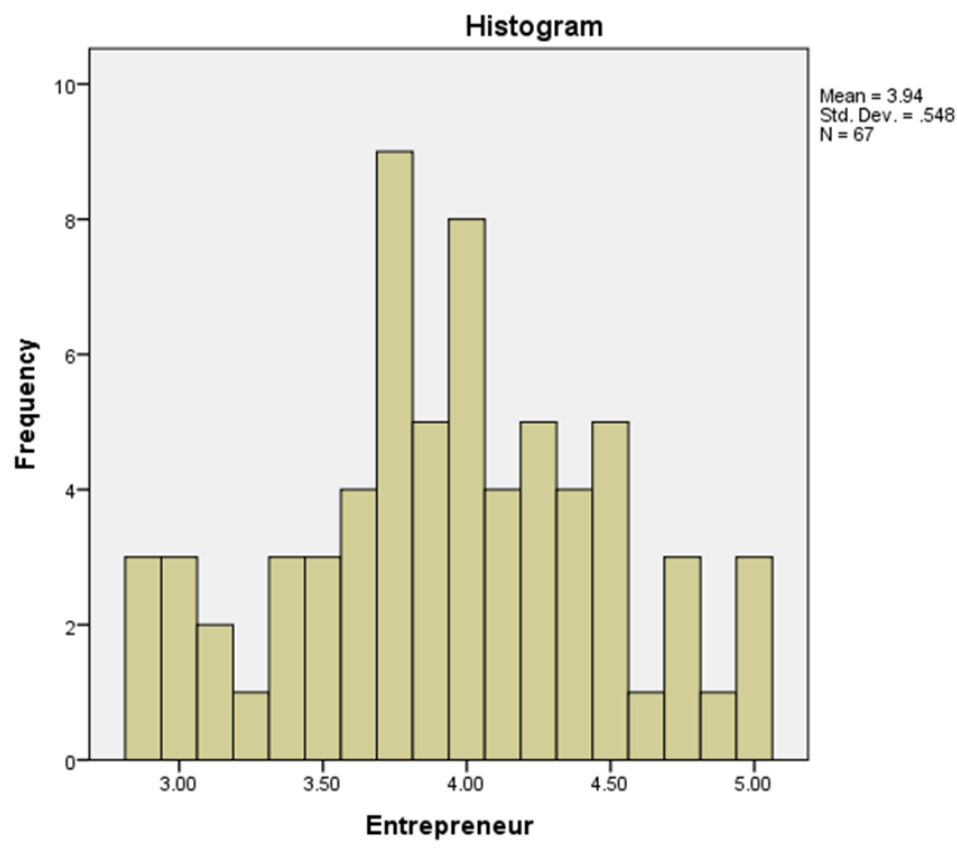


Figure 19 presents the distribution of Personal Values Questionnaire scores for the Malaysian leaders' sample (N = 67). The histogram is centered on a mean of 3.33 (SD = 0.32) on a five-point scale, indicating that respondents generally endorse personal values at a moderately high level, slightly above the neutral midpoint (3.0). Most observations fall within ± 1 SD of the mean (≈ 3.01 – 3.65), reflecting tight dispersion and limited extremes. Visual inspection shows an approximately bell-shaped pattern; any clustering in the upper bins (≥ 3.8) would suggest a mild ceiling tendency, whereas a balanced spread around the mean would support approximate normality. Overall, the relatively small SD indicates considerable consensus in value endorsements across participants, providing a stable basis for subsequent analyses.

Figure 20. ELS Histogram (MY Leaders)



The histogram in Figure 20 centres on a mean of 3.94 (SD = 0.548) on a five-point scale, indicating that respondents generally report moderately high entrepreneurial leadership behaviours. Most scores fall within one standard deviation of the mean (≈ 3.39 – 4.49), reflecting moderate dispersion with limited extremes. Visual inspection shows an approximately bell-shaped pattern; given the mean's position near the upper end of the scale, clustering in the 4.5–5.0 bins would suggest a mild ceiling tendency. Overall, the results indicate that entrepreneurial leadership is widely endorsed in this cohort while still displaying meaningful variability across individuals.

Figure 21. ALS Histogram (MY Leaders)

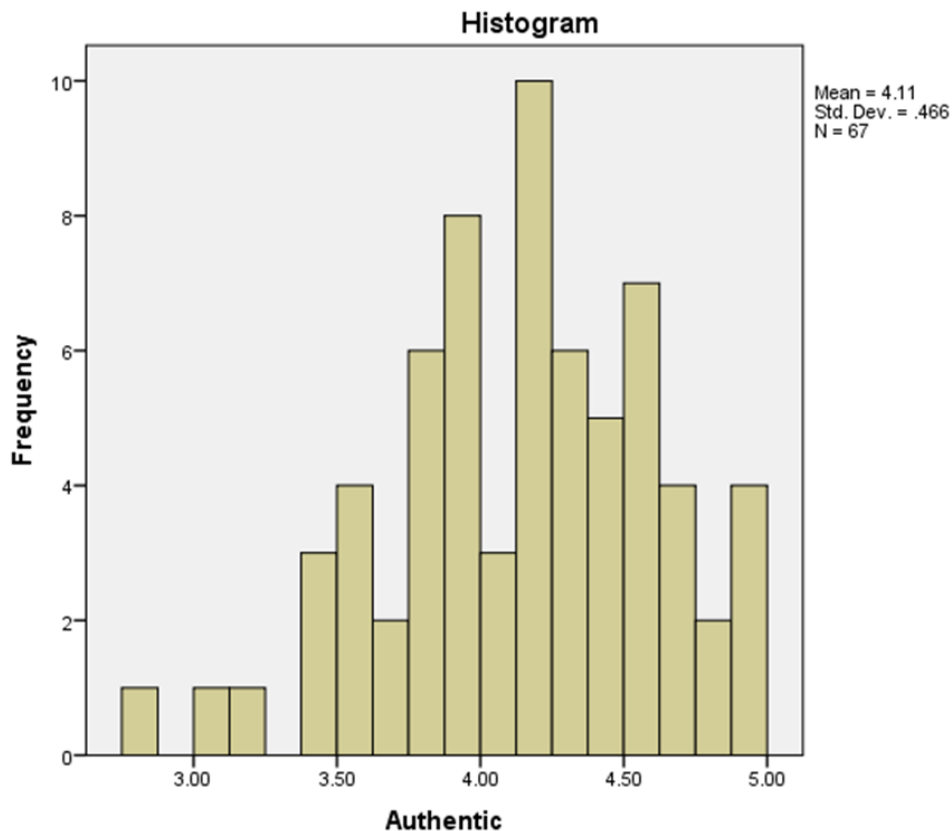


Figure 21 centres on a mean of 4.11 (SD = 0.466), indicating that respondents report high levels of authentic leadership behaviours on the instrument's Likert-type scale. Most observations fall within ± 1 SD of the mean (≈ 3.64 – 4.58), reflecting moderate dispersion with limited extremes. Visual inspection shows an approximately bell-shaped pattern; given the mean's proximity to the upper end of the response scale, any clustering in the 4.5–5.0 bins would suggest a mild ceiling tendency. Overall, the results imply that authentic leadership is prevalent in this cohort with some individual variability.

Table 30. Independent Samples Test for both Countries

VAL	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	10.500	0.002	-8.889	134	0.000
Equal variances not assumed			-8.945	116.103	0.000
ALS					
Equal variances assumed	7.860	0.006	2.650	134	0.009
Equal variances not assumed			2.662	124.097	0.009
ELS					
Equal variances assumed	6.601	0.011	11.299	134	0.000
Equal variances not assumed			11.247	120.015	0.000

Levene's test (Levene's test is used to check the homogeneity of variances) results show that the F value is significant indicating that there are significant differences statistically and the homogeneity assumption has not been met. The significant value shows less than 0.05 and therefore the assumption of the two groups has

similar variances is not observed, a significant result, there is degree of variability in the two groups with regards to personal values. The results indicate $p < 0.05$, therefore the null hypothesis is rejected, and alternate hypothesis is accepted. The variances are significantly different and therefore the assumption that they are equal is rejected. If $p > 0.05$, variances are not significantly different. In this case the assumption that they are equal can be accepted. Furthermore, the value to review is under the category 'equal variances not assumed' based on the value .000 in the Sig. (2-tailed) column. t value is large and therefore the probability that the results occurred by chance is low. An independent t-test found this pattern to be significant, $t(116.10) = -8.94$, $p < 0.05$. This finding suggests that personal values have a clear relationship with the leaders of both countries contributing to the relevance of the study.

4.2.3 Correlation Statistics

Correlation provides the analysis of variances and probably the most profound and far-reaching influence of all statistical methods (Yates, 1951).

Table 31. Correlations (VAL and ALS)

MY Leaders		Personal Values	Authentic Leadership
Personal Values	Pearson Correlation	1	0.630**
	Sig. (2-tailed)		0.000
	N	67	67
Authentic Leadership	Pearson Correlation	0.630**	1
	Sig. (2-tailed)	0.000	
	N	67	67
UK Leaders			
Personal Values	Pearson Correlation	1	0.484**
	Sig. (2-tailed)		0.000

	N	69	69
Authentic Leadership	Pearson Correlation	0.484**	1
	Sig. (2-tailed)	0.000	
	N	69	69

** Correlation is significant at the 0.01 level (2-tailed).

Associations between constructs were tested with Pearson correlation. Pearson's r has a value of 0.63 indicating a large positive correlation between personal values and authentic leadership for Malaysian leaders. UK leaders have a value of r equals to 0.48, close to a significant positive correlation between the two variables. Guideline is adopted from Cohen (1992) Pearson's r values of 0.10, 0.30 and 0.50 as indicative of small, medium, and large effects respectively. A significant positive correlation in the instance of the personal values and authentic leadership for Malaysian leaders.

Table 32. Correlations (VAL and ELS)

MY Leaders		Personal Values	Entrepreneurial Leadership
Personal Values	Pearson Correlation	1	0.463**
	Sig. (2-tailed)		0.000
	N	67	67
Entrepreneurial Leadership	Pearson Correlation	0.463**	1
	Sig. (2-tailed)	0.000	
	N	67	67
UK Leaders			
Personal Values	Pearson Correlation	1	0.389**
	Sig. (2-tailed)		0.001
	N	69	69

Entrepreneurial Leadership	Pearson Correlation	0.389**	1
	Sig. (2-tailed)	0.001	
	N	69	69

** Correlation is significant at the 0.01 level (2-tailed).

Pearson's r has a value of 0.46 indicating a medium positive correlation between personal values and entrepreneurial leadership for Malaysian leaders. UK leaders have a value of r equals to 0.40, medium positive correlation between the two variables. The correlation value of variables is above 0.30 indicating a moderate level.

However, the values show a statistically significant correlation between leaders' personal values and authentic leadership and personal values and entrepreneurial leadership in both countries ($p < 0.05$) as seen in Table 33. Scatterplot graphs slope upward from zero indicating a positive correlation between the two variables. More details are evident in the next page.

The Box's Test of Equality of Covariance Matrices when comparing gender, age, country with the VALS, ALS and ELS indicate a p value of 0.000 which is less than 0.001, breaching the assumption that the variance/covariance results are consistent.

Figure 22. Correlation Matrix – VAL, ALS (UK and MY Leaders)

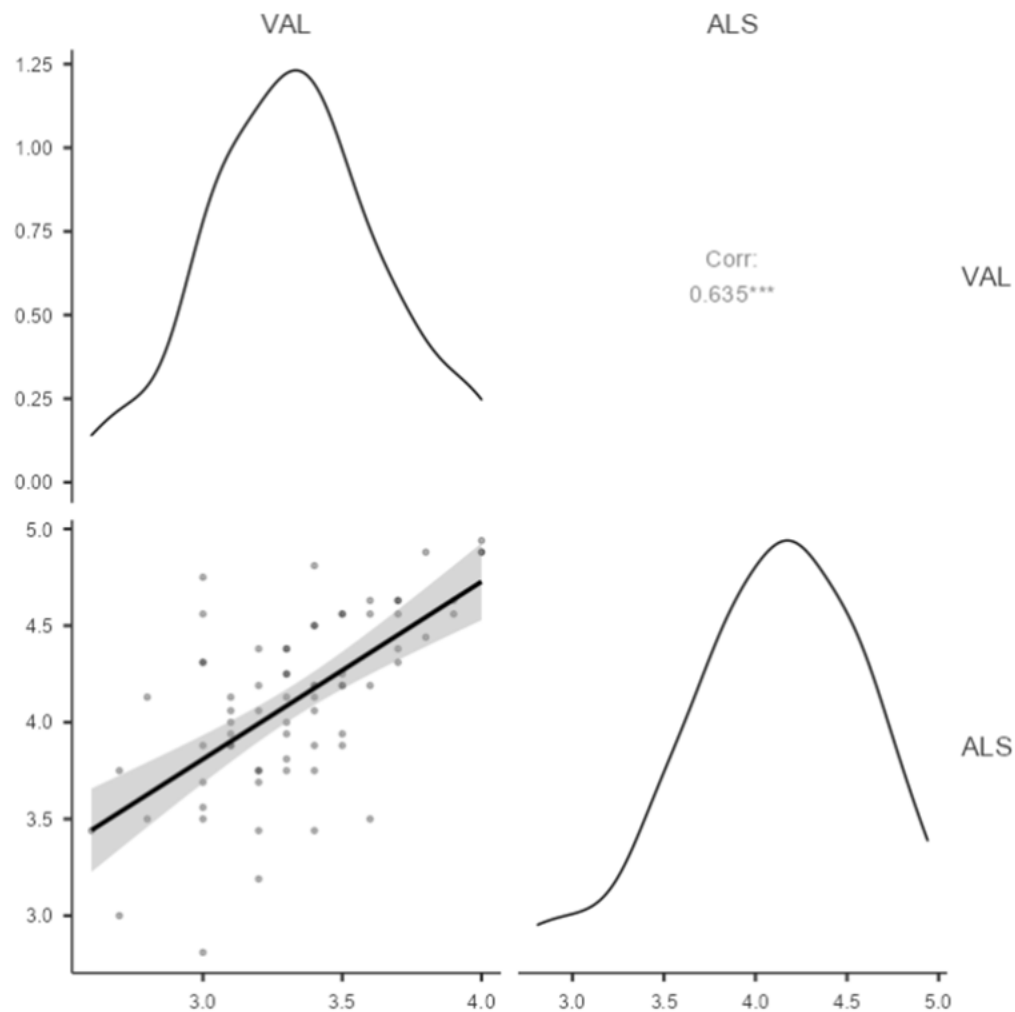


Figure 22 shows a strong and positive linear correlation between personal values (VAL) of combined UK and Malaysian leaders with authentic leadership (ALS) displaying a Pearson r value of 0.635 with a statistically significant p value of $< .001$. Therefore, changes in variable VAL are associated with changes in variable ALS.

Figure 23. Correlation Matrix – VAL, ELS (UK and MY Leaders)

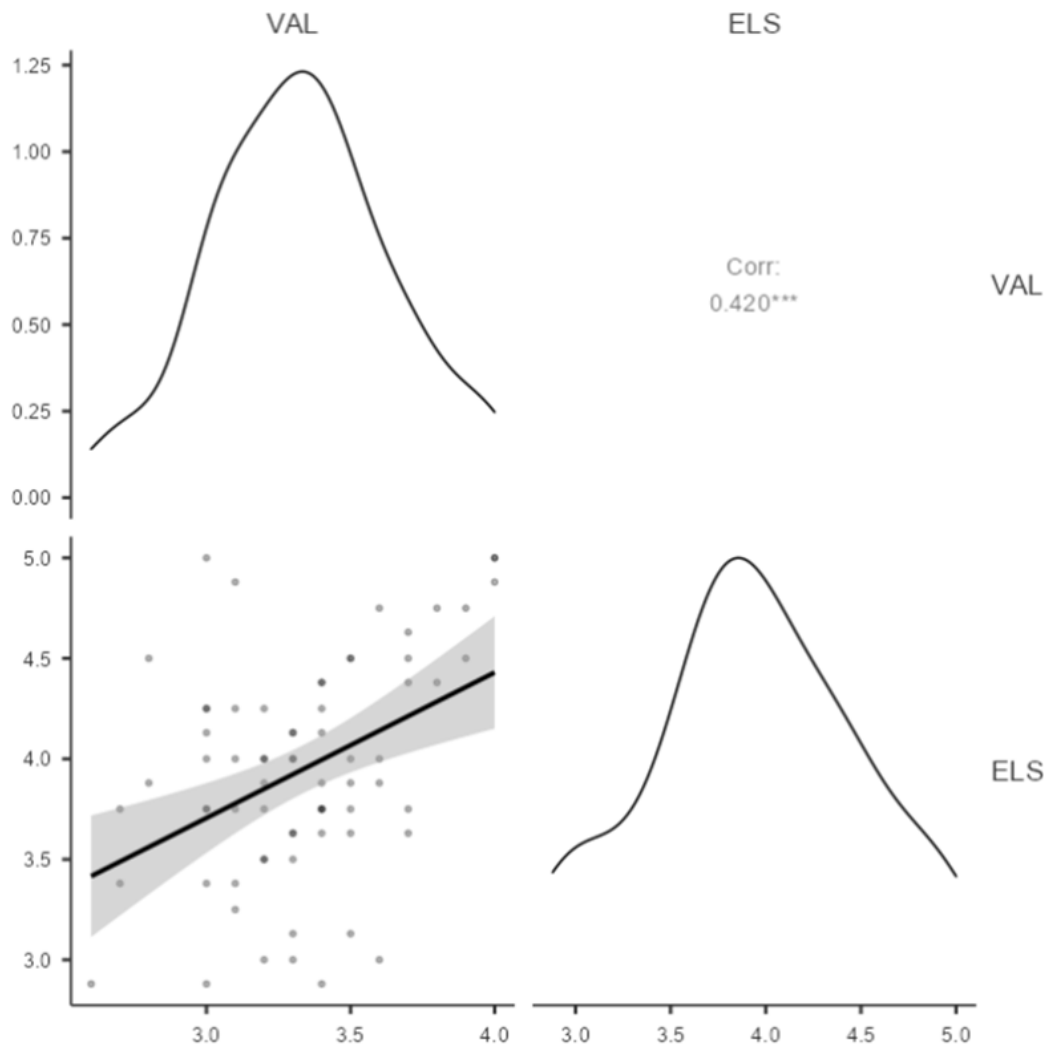


Figure 23 depicts a moderate and positive linear correlation between personal values (VAL) of UK and Malaysian leaders with entrepreneurial leadership (ELS) depicting a Pearson r value of 0.420 with a statistically significant p value of $< .001$. Guidance provided by Cohen (1988) contends that strong correlation relationship is 0.5, moderate relationship is 0.3 and weak relationship is 0.1.

The findings derived from Figure 22 and Figure 23 indicate that the personal values of UK and Malaysian millennial leaders contribute more towards their authentic leadership behaviour in comparison to their entrepreneurial leadership approach.

4.2.4 Factor Analysis

Factor analysis is employed to group similar variables into common factors, thereby identifying underlying constructs (Shrestha, 2021). Rotation serves to maximise the loading of each variable on its respective factor while minimising its loading on other factors (Field, 2005). The relevant variables are examined in subsequent tests, and total scores can be interpreted according to the following guidelines: very high (64–80), high (48–64), low (32–48), and very low (16–32) (Yeşilkaya and Aydın, 2016).

Table 33. Rotated Component - VAL and ELS (MY Leaders)

Variable (VAL)	Component				Variable (ELS)	Component		
	1	2	4	5		2	3	4
PWR		0.646			EO1	0.632		
ACH				0.676	EO2	0.802		
HDN			0.757		EO3			0.591
STM				0.692	EO5	0.697		
SDR				0.551	EO6		0.772	
TRD	0.737				CB1		0.709	
CFM	0.832				CB2		0.566	
SEC	0.887							

An oblimin rotation was conducted to examine the relationship between personal values (VAL) and entrepreneurial leadership (ELS). The analysis yielded five distinct factors, accounting for a cumulative variance of 61.5%. Factor loadings were interpreted using a threshold of 0.50, as determined by the researcher. The first factor exhibited strong loadings on Tradition (TRD), Conformity (CFM), and Security (SEC), while the second factor was primarily associated with Power (PWR). The fourth factor corresponded to Hedonism (HDN), and the fifth factor encompassed Achievement (ACH), Stimulation (STM), and Self-direction (SDR).

The first factor, dominated by TRD, reflects respect, commitment, and adherence to cultural, religious, or customary norms (Schwartz, 2003). CFM denotes restraint

from actions that may disrupt social order or violate established norms (Schwartz, 1992), whereas SEC emphasizes stability, safety, and harmony at both individual and societal levels (Schwartz, 1992). Collectively, these values align with Schwartz's (1992) Conservation dimension, which prioritises maintaining the status quo and minimising behaviours that threaten group cohesion. Such orientations often entail self-sacrifice and compliance with tradition. In this instance, security value can be interpreted as a value that focuses more on personal development than on self-defence as proposed by Belic et al. (2022). Furthermore, security was found to be linked to effective team dynamics (Woehr, Arciniega and Poling, 2013). While conservation-oriented individuals may support organisational change (Cohen and Caspary, 2011), Prinsloo and Lew (2021) suggest that decision-makers emphasising these values may exhibit less deliberative decision-making due to their reliance on traditional practices. Leaders with strong conservation values tend to favour risk aversion, hierarchical respect, and established procedures. Sarid (2016) reinforces this perspective, noting that a positive correlation between conservation and self-enhancement values is linked to transactional leadership tendencies. Conversely, values such as Stimulation (STM) and Benevolence are associated with transformational leadership, with STM reflecting novelty-seeking, risk-taking, and experiential engagement (Schwartz, 1992).

Regarding other factors, PWR signifies the pursuit of social status, influence, and resource control; ACH represents striving for success through competence aligned with societal standards; HDN denotes the pursuit of pleasure and sensory gratification, often linked to openness to change; and SDR emphasises autonomy in thought and action (Schwartz, 1992). Power, Achievement, and Hedonism collectively form the Self-enhancement dimension within Schwartz's value framework, characterised by advancing personal interests, asserting dominance, and prioritising individual success (Giménez and Tamajón, 2019).

In examining the relationship between entrepreneurial leadership and values, the factor analysis resulted in the extraction of three factors. The second factor demonstrated loadings on 'Radical Ideas' (EO1), 'Ideas for new products/services'

(EO2), and ‘Passion for work’ (EO5). The third factor was associated with ‘Vision for the future of business’ (EO6), ‘Challenge and push staff to innovate’ (CB1), and ‘Challenge current ways of doing business’ (CB2). The fourth factor loaded on ‘Takes risks’ (EO3). The initial loadings (EO1, EO2, EO3, EO5, and EO6) correspond to Entrepreneurial Orientation, whereas CB1 and CB2 align with Creativity-Supportive Behaviour, as conceptualised by Renko et al. (2015). These findings are consistent with previous research (Wu et al., 2008; Sklaveniti, 2017), which established that entrepreneurial leaders’ behaviours are significantly linked to the creativity of their followers. Furthermore, innovation remains a critical component underpinning an entrepreneurial leadership approach (Sushant, 2024).

Table 34. Rotated Component - VAL and ELS (UK Leaders)

Variable (VAL)	Component			Variable (ELS)	Component	
	1	2	4		1	3
ACH		0.849		EO1	0.775	
HDN			0.730	EO2	0.691	
STM		0.628		EO3		0.746
SDR		0.608		EO4		0.704
UNV			0.555	CB1	0.550	
TRD			0.572	CB2		0.607
CFM	0.654					

The factor analysis revealed four components accounting for a cumulative variance of 57%. The first factor demonstrated a strong loading on ‘Conformity’ (CFM), while the second factor was associated with ‘Achievement’ (ACH), ‘Stimulation’ (STM), and ‘Self-direction’ (SDR). The fourth factor showed significant loadings on ‘Hedonism’ (HDN), ‘Universalism’ (UNV), and ‘Tradition’ (TRD).

According to Schwartz (1992), ‘Universalism’ encompasses values such as tolerance, understanding, and a commitment to protecting nature and all living beings, and is situated within the Self-transcendence dimension. The Conservation dimension, although discussed in the context of Malaysian

leadership, is notably absent in the UK sample with regard to 'Security'. The second factor, which includes 'Achievement', may also be interpreted as part of the Conservation dimension. 'Conformity', which forms the third factor, reflects values of obedience, politeness, and the avoidance of behaviours that may harm others, aligning it with the Conservation category.

As previously noted, 'Achievement' reflects the pursuit of personal success through the demonstration of competence in accordance with societal standards. Empirical evidence suggests that societies with stronger economic performance tend to prioritise values such as hedonism, stimulation, self-direction, universalism, and benevolence, while placing less emphasis on security, conformity, achievement, and power (Czupryna et al., 2024). However, Schwartz and Bardi (2001), in a cross-national study involving 13 countries, found that values related to security and conformity were prevalent, likely due to the importance of maintaining harmonious group relations through conflict avoidance and adherence to group norms.

The entrepreneurial leadership linked factor analysis identified two components with a cumulative variance of 50%. The first factor loaded on 'Creative solutions' (EO4) and 'Takes risks' (EO3), while the second factor was associated with 'Radical ideas' (EO1). Both components are indicative of Entrepreneurial Orientation. Prior research has linked workplace creativity to various leadership styles. For example, Lee et al. (2020) argue that authentic leadership fosters transparency, which, when emulated by followers, encourages creative engagement. Risk-taking, frequently cited as a defining trait, is a core characteristic of entrepreneurial leadership. Kerr, Kerr, and Dalton (2019) highlight that entrepreneurs consistently exhibit higher levels of risk tolerance compared to non-entrepreneurs.

The rotated components of personal values yielded noteworthy insights. Among Malaysian millennial leaders, the highest personal value factor was 'Security' (88%), followed by 'Conformity' (83%). These values reflect a concern for individual and collective wellbeing, societal stability, and behavioural restraint to prevent harm and uphold social norms. In contrast, UK millennial leaders prioritised

‘Achievement’ (84%) and ‘Hedonism’ (73%), suggesting a stronger orientation towards personal success through societal recognition, followed by the pursuit of pleasure, self-gratification, and openness to new experiences and change.

Table 35. Rotated Component - ALS (UK Leaders)

Variables	Component				
	1	2	3	4	5
RT3	0.850				
RT4	0.778				
RT5					0.881
IM2			0.840		
IM3			0.734		
IM4			0.607		
BP1	0.695				
BP2		0.671			
BP3		0.876			
SA2				0.861	
SA3				0.677	

Note: RT = Relational Transparency, IM = Internalised Moral Perspective, BL = Balanced Processing, SA = Self-Awareness. IM1 = Demonstrates beliefs that are consistent with actions; BP2 = Analyse relevant data before coming to a decision; BP3 = Listens carefully to different points of view before coming to conclusions; IM2 = Makes decisions based on leader’s core values; IM3 = Asks staff to take positions that support leader’s core values; RT3 = Encourages everyone to speak their mind; RT4 = Tells staff the hard truth; RT2 = Admits mistakes when they are made; SA3 = Know when it is time to re-evaluate leader’s position on important issues; SA2 = Can accurately describe how others view leader’s work capabilities; SA4 = Show understanding of how specific actions impact others; BP1 = Solicit views that challenge leader’s deeply held positions; RT5 = Display emotions exactly in line with leader’s feelings.

The analysis of UK millennial leaders using the Authentic Leadership Scale (ALS) identified five factors, accounting for a cumulative variance of 65.6%. Factor 5 demonstrated a strong correlation with RT5, which reflects emotional transparency—leaders expressing emotions that are congruent with their internal feelings. Additionally, Factor 4 was strongly associated with SA2, a variable linked to Self-Awareness. This construct involves a clear understanding of one’s own

values, moral perspectives, knowledge, and strengths, as well as an awareness of these attributes in others (Lloyd-Walker and Walker, 2011).

Factor 1 showed a strong correlation with Balanced Processing (BP3), which is characterised by the consideration of multiple perspectives prior to decision-making (Avolio et al., 2004). Gardner et al. (2005) further suggest that leaders who engage in balanced processing are open to views that challenge their deeply held beliefs, including both positive and critical interpretations of their leadership style. However, Crawford et al. (2020) argue that such leaders may also take risks to remain loyal to their values, resulting in less predictable behaviour in contexts of uncertainty.

Factor 3 was closely aligned with ME3, representing an Internalised Moral Perspective. This dimension reflects behaviour that is consistent with deeply held moral principles (Avolio et al., 2004). While Crawford et al. (2020) liken this trait to moral excellence, they critique its limited scope in capturing the authentic leader's broader aspiration to promote collective welfare and contribute to the public good.

The rotated component matrix provided further insight into the nature of these factors. Factor 1 was defined by Q11 ('I encourage everyone to speak their mind' – RT3), Q12 ('I tell staff the hard truth' – RT4), and Q17 ('I solicit views that challenge my deeply held positions' – BP1). Factor 2 included Q18 ('I analyse relevant data before coming to a decision' – BP2) and Q19 ('I listen carefully to different points of view before coming to conclusions' – BP3). Factor 3 was shaped by Q13 ('I make decisions based on my core values' – IM2), Q14 ('I ask staff to take positions that support my core values' – IM3), and Q16 ('I make difficult decisions based on high standards of ethical conduct' – IM4). Factor 4 comprised Q22 ('I know when it is time to re-evaluate my position on important issues' – SA2) and Q23 ('I show understanding of how specific actions impact others' – SA3). Factor 5 was defined by Q11 ('I display emotions exactly in line with my feelings' – RT5).

Overall, the findings suggest that UK millennial leaders tend to make decisions grounded in their core values, encourage staff to adopt positions aligned with these principles, and uphold high ethical standards in complex decision-making

contexts (IM2, IM3, IM4). They foster open communication, promote honesty, and express emotions that authentically reflect their internal states (RT3, RT4, RT5). These leaders actively seek out perspectives that challenge their beliefs, analyse relevant data, and listen attentively to diverse viewpoints before reaching conclusions (BP1, BP2, BP3). Furthermore, they demonstrate self-awareness by recognising when to reassess their positions and understanding how their actions affect others (SA2, SA3).

Table 36. Rotated Component - ALS (MY Leaders)

Variables	Component			
	1	2	3	4
RT2		0.855		
RT3		0.707		
RT4			0.627	
IM2				0.635
BP1				0.801
BP2	0.792			
BP3	0.868			
SA1			0.694	
SA2			0.736	
SA3	0.669			

The factor analysis identified four distinct factors, collectively explaining 60.6% of the total variance, which indicates a robust underlying structure in the data.

Factor 1 exhibited strong loadings on BP2 ('I solicit views that challenge my deeply held positions'), BP3 ('I analyse relevant data before coming to a decision'), and SA3 ('I know when it is time to re-evaluate my position on important issues'). This factor reflects the dimensions of balanced processing and self-awareness, both of which are foundational to authentic leadership. Self-awareness, as emphasised by Woodward and Shaffakat (2016), requires leaders to engage in deliberate self-reflection to understand their values and behaviours in context. The prominence of balanced processing suggests that these leaders adopt a systematic and inclusive approach to decision-making, which aligns with Durrah et al.'s (2024) assertion that balanced processing enhances workplace flourishing through vitality and

learning. The strong presence of these attributes implies that Malaysian millennial leaders prioritise evidence-based reasoning and openness to alternative viewpoints, which may contribute to adaptive and ethical leadership practices in dynamic organisational environments.

Factor 2 demonstrated strong correlations with RT2 ('I admit mistakes when they are made') and RT3 ('I encourage everyone to speak their mind'), representing relational transparency. This finding suggests that these leaders value honesty and open communication, fostering trust and psychological safety within teams. Such behaviours are critical in collectivist cultures, where maintaining harmony and mutual respect is essential, yet the willingness to admit mistakes signals a shift towards more participative and accountable leadership norms.

Factor 3 was characterised by strong loadings on RT4 ('I tell staff the hard truth'), SA1 ('I listen carefully to different points of view before coming to conclusions'), and SA2 ('I seek feedback to improve interactions with others'). This combination reinforces the interplay between relational transparency and self-awareness. Leaders who actively seek feedback and engage in candid communication demonstrate a commitment to continuous improvement and authenticity. This behaviour may also indicate an emerging leadership identity that balances traditional hierarchical expectations with modern demands for openness and inclusivity.

Factor 4 showed good to strong loadings on IM2 ('I make decisions based on my core values') and BP1 ('I make difficult decisions based on high standards of ethical conduct'), aligning with the dimension of internalised moral perspective. This dimension underscores a leader's adherence to deeply held ethical principles, which is consistent with Durrah et al.'s (2024) view that authentic leaders maintain fairness and integrity even under pressure. The presence of this factor suggests that ethical decision-making remains a cornerstone of leadership practice among Malaysian millennials, potentially reflecting cultural and organisational expectations for moral accountability.

The findings collectively indicate that Malaysian millennial leaders exhibit a strong orientation towards reflective, ethical, and participative leadership behaviours. Their emphasis on balanced processing and self-awareness suggests a readiness to adapt and learn, while relational transparency points to a growing preference for openness and dialogue. The integration of internalised moral perspective further reinforces the ethical foundation of their leadership approach. These patterns may reflect generational shifts towards authenticity and inclusivity, influenced by global leadership trends and local cultural dynamics.

Table 37. Group Statistics (VAL for Leaders)

Location	N	Mean	SD	Std. Error Mean
UK	69	3.0145	0.39604	0.04768
Malaysia	67	3.3343	0.31983	0.03907

Note: Cohen's d calculation is -0.8884380351728963 and effect-size r is -0.4059664257968238. Calculation is performed based on Becker's (2000) effect size calculators. This indicates that personal values have large differences between the two countries as Cohen's guidelines state 0.20 (small effect), 0.50 (medium effect) and 0.80 (large effect). Cohen (1992) suggests effect size to be in the lower domain if r varies around 0.1, values around 0.3 are medium and large for those beyond 0.5.

Demographic variables were examined as potential predictors of personal values, authentic leadership, and entrepreneurial leadership. The analysis revealed a statistically significant difference between leaders in Malaysia and their counterparts in the United Kingdom across these constructs. This suggests that national context may exert a meaningful influence on leadership orientations and value systems, potentially reflecting cultural, institutional, and socio-economic differences between the two countries.

Interestingly, neither gender nor age demonstrated a significant effect on any of the three constructs within or across countries, as presented in Table 40. This finding challenges commonly held assumptions that demographic characteristics such as age and gender shape leadership behaviours and values. Instead, it implies that generational or gender-based differences may be less pronounced than contextual or cultural factors in determining leadership approaches.

From a theoretical perspective, these results align with cross-cultural leadership research, which posits that societal norms and organisational environments exert stronger influence on leadership styles than individual demographic attributes (Sunarso et al. 2024; Zhang, 2023; Nwankwo et al., 2024). Practically, this suggests that leadership development initiatives should prioritise cultural adaptability and contextual awareness over demographic segmentation.

4.2.5 Factorial ANOVA

Factorial ANOVA is a procedure used to explore the influence of two or more independent variables known as factors on a single dependent variable (Paskewitz, 2017).

Table 38. Factorial ANOVA (UK, MY Leaders)

Effect	Value	F	Hypothesis df	Error df	Sig.
Country and Gender	0.31	1.336	3.000	125.000	0.266
Country and Age	0.089	4.048	3.000	125.000	0.009
Gender and Age	0.037	1.587	3.000	125.000	0.196
Country, Gender and Age	0.040	1.724	3.000	125.000	0.165

In the above country analysis, age and gender were used to identify if there are any significant findings on UK and Malaysian leaders. This was carried out due to the differences in percentage of gender and age of respondents in both sample sizes. The values in the Sig. column were reported as higher than $p < .0005$. Therefore, it can be concluded that there was no statistically significant difference in age and gender based on the country of origin. Thus, no further follow-up tests were required based on these constructs.

4.3 Study II

Study II comprises of the followers' responses pertaining to their leaders based on the questionnaire items provided. UK followers have a total of 141 responses followed by Malaysian followers with a total of 72 responses.

4.3.1 Descriptive Statistics

A similar approach to Study I, although the details provided in Table 39 involve the demographics of followers of millennial leaders within the UK and Malaysia.

Table 39. Demographics of UK and MY Followers

	UK Followers (N=141)		MY Followers (N=72)	
	Frequency	Percent	Frequency	Percent
Age:				
20 - 30	47	33.3	35	48.6
31 - 40	44	31.2	28	38.9
41 - 50	33	23.4	9	12.5
51 - 60	15	10.6	0	
61 and above	2	1.4		
Gender:				
Female	74	52.5	42	58.3
Male	66	46.8	30	41.7
Qualification:				
Secondary school	22	15.6	4	5.6
College or university	80	56.7	52	72.2
Post-graduate	37	26.2	16	22.2
No qualifications	2	1.4	0	

Location:				
England/West Malaysia	119	84.4	57	79.2
Wales/East Malaysia	6	4.3	15	20.8
Scotland	11	7.8		
Northern Ireland	5	3.5		

UK Followers

The sample of UK followers comprised 66 males, 74 females, and 1 respondent who preferred not to disclose their gender. The most represented age group was 20 to 30 years, accounting for 33.3% (N = 47) of the sample, followed closely by the 31 to 40 age group at 31.2% (N = 44). Collectively, these two groups represent 64% of the UK follower sample, indicating a strong representation of millennials.

In terms of educational attainment, 56.7% (N = 80) of UK followers reported having completed college or university-level qualifications, suggesting a relatively high level of formal education among the sample.

Malaysian Followers

The Malaysian follower sample consisted of 30 males and 42 females. The 20 to 30 age group was the most prominent, comprising 48.6% (N = 35) of respondents, followed by the 31 to 40 age group at 38.9% (N = 28). Combined, these age categories represent 87% of the Malaysian follower sample, further reinforcing the predominance of millennials in this cohort. These findings align with demographic trends reported by Statista (2021), as discussed in the Introduction chapter.

Regarding educational background, 72.2% (N = 52) of Malaysian followers indicated possession of college or university qualifications, reflecting a high level of educational attainment similar to their UK counterparts.

4.3.2 Reliability of Measurement Scales

Reliability refers to the extent to which a measurement consistently and stably captures the phenomenon under investigation (Carmines and Zeller, 1979). It is a critical component in quantitative research, as it ensures that the results obtained are dependable and reproducible. According to Huck (2008), reliability testing is essential for evaluating the internal consistency of the components within a measuring instrument, thereby confirming the coherence and stability of the data collected.

Table 40. Reliability of Followers' Questions

	UK Followers		MY Followers	
Authenticity Questions	Mean	SD	Mean	SD
Question 7 (ALS_RT1)	3.79	1.034	3.58	0.931
Question 8 (ALS_RT2)	3.30	1.246	3.26	1.199
Question 9 (ALS_RT3)	3.57	1.338	3.79	1.020
Question 10 (ALS_RT4)	3.48	1.263	3.60	1.030
Question 11 (ALS_RT5)	3.18	1.221	3.39	1.029
Question 12 (ALS_IM1)	3.50	1.223	3.32	1.046
Question 13 (ALS_IM2)	3.68	1.142	3.67	0.949
Question 14 (ALS_IM3)	3.40	1.230	3.74	1.035
Question 16 (ALS_IM4)	3.54	1.285	3.53	1.138

Question 17 (ALS_BP1)	3.11	1.202	3.26	1.075
Question 18 (ALS_BP2)	3.60	1.247	4.04	1.054
Question 19 (ALS_BP3)	3.62	1.274	3.88	1.020
Question 20 (ALS_SA1)	3.47	1.366	3.69	1.057
Question 21 (ALS_SA2)	3.20	1.238	3.57	1.124
Question 22 (ALS_SA3)	3.23	1.269	3.51	1.126
Question 23 (ALS_SA4)	3.46	1.268	3.72	0.923
Entrepreneurship Questions				
Question 24 (ELS_EO1)	3.16	1.179	3.38	1.093
Question 25 (ELS_EO2)	3.07	1.340	3.47	0.964
Question 26 (ELS_EO3)	2.96	1.281	3.31	1.182
Question 27 (ELS_EO4)	3.28	1.311	3.49	1.035
Question 28 (ELS_EO5)	3.76	1.247	3.79	1.087
Question 29 (ELS_EO6)	3.67	1.257	3.89	1.001
Question 30 (ELS_CB1)	3.52	1.175	3.74	1.061

Question 31 (ELS_CB2)	3.35	1.259	3.56	1.185
Values Questions				
Question 33 (VAL_PWR)	2.72	0.740	2.78	0.773
Question 34 (VAL_ACH)	3.11	0.698	3.21	0.604
Question 35 (VAL_HDN)	2.65	0.767	2.83	0.769
Question 36 (VAL_STM)	2.64	0.847	2.89	0.742
Question 37 (VAL_SDR)	2.98	0.770	3.07	0.657
Question 38 (VAL_UNV)	2.57	0.830	2.85	0.781
Question 39 (VAL_BNV)	2.98	0.823	3.22	0.610
Question 40 (VAL_TRD)	2.71	0.899	2.82	0.738
Question 41 (VAL_CFM)	2.87	0.745	3.04	0.701
Question 42 (VAL_SEC)	2.96	0.778	3.17	0.531
Technology Questions				
Question 43 (TEC1)	3.72	1.202	3.92	0.931
Question 44 (TEC2)	3.45	1.130	3.69	0.988

Note: Two questions were not included in the reliability test. Question 15 was utilised to gauge participants' engagement (To ensure full engagement, please select 'fairly often' for this question) whereas Question 32 relates to whether the leader has a positive impact on staff ('yes' or 'no' answer).

Cronbach's Alpha reflected a value of 0.950 for UK followers and 0.944 for Malaysian followers which indicate high levels of internal consistency.

Table 41. ANOVA UK and MY Followers

UK Followers						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p-value</i>	<i>F crit</i>
Rows	199.99	140	1.428	5.694	3.02×10^{-35}	1.266
Columns (ALS, ELS, VAL)	31.90	2	15.951	63.587	1.71×10^{-23}	3.028
Error	70.24	280	0.250			
Total	302.13	422				
MY Followers						
Rows	68.02	71	0.958	5.540	2.63×10^{-18}	1.389
Columns (ALS, ELS, VAL)	17.25	2	8,628	49.886	3.90×10^{-17}	3.060
Error	24.55	142	0.173			
Total	109.84	215				

To assess the internal consistency of the measurement instruments, Cronbach's alpha was calculated for the values ALS, ELS and VAL constructs across both UK and Malaysian follower samples.

For the UK followers, the Cronbach's alpha was computed as 0.938 for ALS, 0.905 for ELS and 0.730 for VAL.

For the Malaysian followers, the equivalent calculation yielded a value of 0.913 (ALS), 0.886 (ELS) and 0.811 (VAL).

Both values indicate good levels of internal consistency, well above the commonly accepted threshold of 0.70, thereby confirming the reliability of the VAL construct across both cultural contexts.

4.3.3 Correlation Statistics

Table 42. Correlations (VAL, ALS)

MY Followers		Personal Values	Authentic Leadership
Personal Values	Pearson Correlation	1	0.549**
	Sig. (2-tailed)		0.000
	N	72	72
Authentic Leadership	Pearson Correlation	0.549**	1
	Sig. (2-tailed)	0.000	
	N	72	72
UK Followers			
Personal Values	Pearson Correlation	1	0.633**
	Sig. (2-tailed)		0.000
	N	141	141
Authentic Leadership	Pearson Correlation	0.633**	1
	Sig. (2-tailed)	0.000	
	N	141	141

** Correlation is significant at the 0.01 level (2-tailed).

A Pearson correlation coefficient was calculated to examine the relationship between personal values and authentic leadership from the perspective of followers in both the United Kingdom and Malaysia.

For the Malaysian followers, the analysis yielded a correlation coefficient of $r = 0.55$, indicating a large positive correlation between the two variables. This

suggests that higher alignment with personal values is associated with stronger perceptions of authentic leadership among Malaysian respondents.

Similarly, the UK followers demonstrated a correlation coefficient of $r = 0.63$, also reflecting a large positive correlation. This further supports the notion that personal values are strongly linked to perceptions of authentic leadership across both cultural contexts.

Table 43. Correlations (VAL, ELS)

MY Followers		Personal Values	Entrepreneurial Leadership
Personal Values	Pearson Correlation	1	0.513**
	Sig. (2-tailed)		0.000
	N	72	72
Entrepreneurial Leadership	Pearson Correlation	0.513**	1
	Sig. (2-tailed)	0.000	
	N	72	72
UK Followers			
Personal Values	Pearson Correlation	1	0.635**
	Sig. (2-tailed)		0.000
	N	141	141
Entrepreneurial Leadership	Pearson Correlation	0.635**	1
	Sig. (2-tailed)	0.000	
	N	141	141

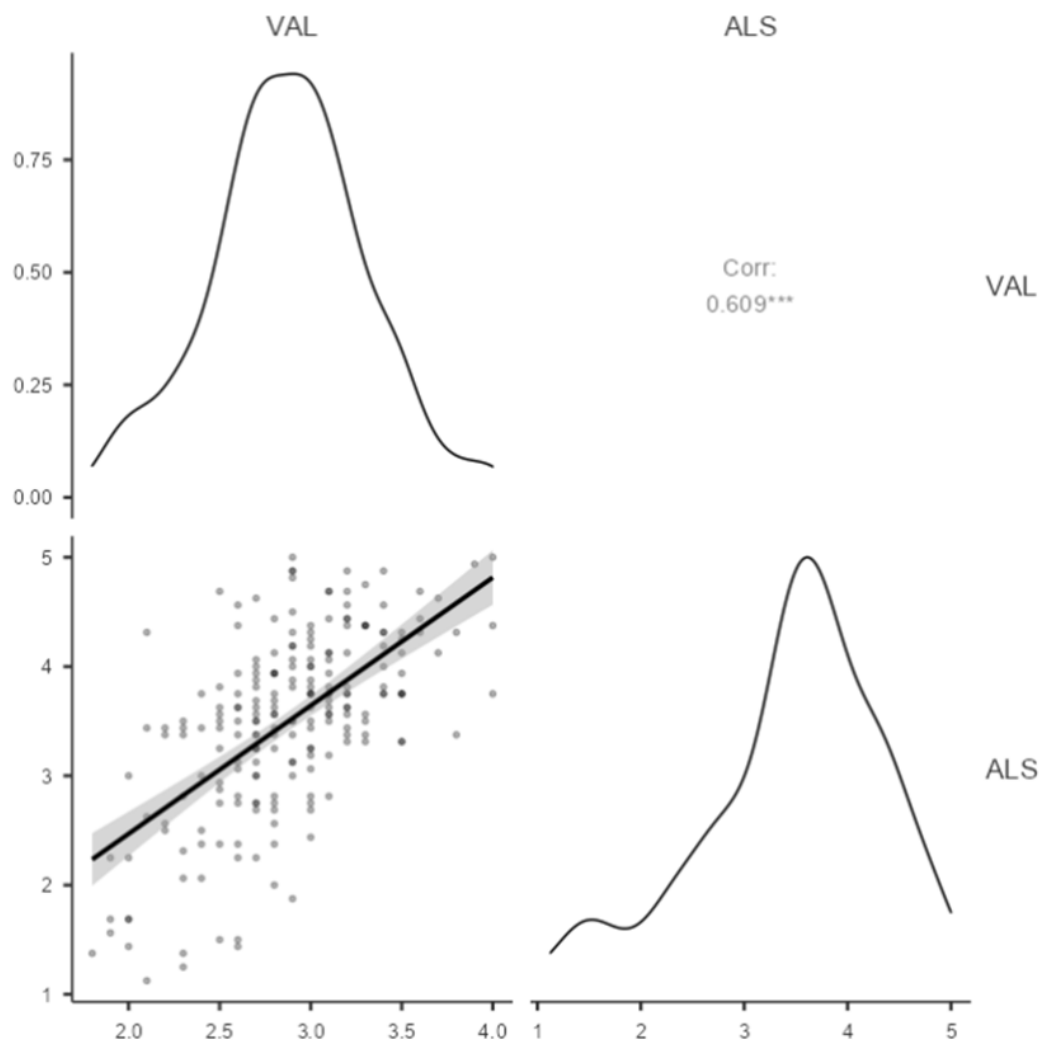
** Correlation is significant at the 0.01 level (2-tailed).

A Pearson correlation coefficient was calculated to explore the relationship between personal values and entrepreneurial leadership among followers in both Malaysia and the United Kingdom.

For the Malaysian followers, the correlation coefficient was $r = 0.51$, indicating a large positive correlation. This suggests that stronger alignment with personal values is associated with higher perceptions of entrepreneurial leadership within this group.

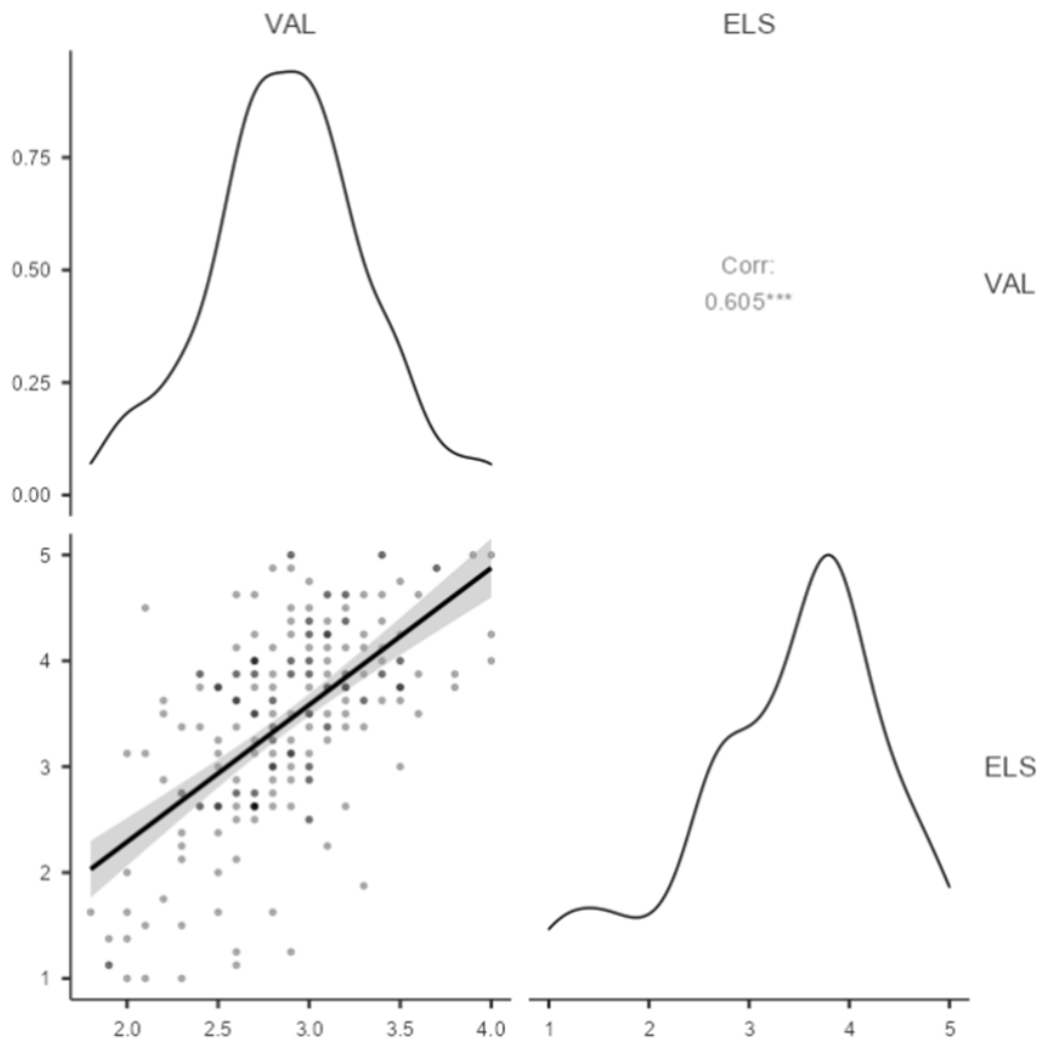
Among the UK followers, the correlation was even stronger, with $r = 0.63$, also reflecting a large positive correlation between the two variables. These findings reinforce the significance of personal values in shaping perceptions of entrepreneurial leadership across both cultural contexts.

Figure 24. Correlation Matrix - VAL, ALS (UK and MY Followers)



The scatter plot presented in Figure 24 illustrates a strong and positive linear relationship between personal values (VAL) and authentic leadership (ALS) across UK and Malaysian followers. The Pearson correlation coefficient was calculated as $r = 0.609$, with a statistically significant p -value $< .001$, indicating a robust association between the two constructs.

Figure 25. Correlation Matrix - VAL, ELS (UK and My Followers)



Similarly, Figure 25 depicts a strong and positive linear correlation between personal values (VAL) and entrepreneurial leadership (ELS) among UK and Malaysian followers. The correlation coefficient was $r = 0.605$, also with a statistically significant $p\text{-value} < .001$.

These findings suggest that followers in both cultural contexts perceive personal values as a key contributor to authentic and entrepreneurial leadership behaviours among millennial leaders. The consistency in correlation strength across both groups reinforces the cross-cultural relevance of personal values in shaping leadership perceptions.

4.3.4 Factor Analysis

The central aim of factor analysis is to explain the covariation among observed variables through their linear dependencies (Cattell, 1988). This statistical technique is particularly valuable in identifying the underlying structure of data by examining the relationships between items within a scale and the latent factors they share. As Tavakol and Wetzel (2020) emphasise, factor analysis enables researchers to determine how well individual items align with the constructs they are intended to measure, thereby contributing to the overall validity of the instrument.

Table 44. Rotated Component - VAL, ELS (MY Followers)

Variable (VAL)	Component		Variable (ELS)	Component		
	1	2		1	2	3
SEC	0.720		EO6	0.732		
UNV	0.669		CB1	0.701		
TRD	0.620		EO5	0.694		
SDR		0.993	CB2	0.660		
			EO3		0.826	
			EO4		0.643	
			EO2			0.724
			EO1			0.664

Factor analysis was conducted to explore the underlying structure of the personal values (VAL) and entrepreneurial leadership (ELS) constructs.

Personal Values (VAL)

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for VAL was 0.80, indicating a meritorious level of suitability for factor analysis. Three factors were extracted, accounting for a cumulative variance of 42%.

- Factor 1 included loadings on Security (SEC), Universalism (UNV), and Tradition (TRD), reflecting the dimensions of Conservation and Self-Transcendence.
- Factor 2 was characterised by a loading on Self-Direction (SDR), representing Openness to Change.

These findings align with Schwartz's (2006) value theory, which describes Universalism as encompassing values related to understanding, appreciation, tolerance, and protection of the welfare of all people and nature. Expanding on this, Widiyanto, Harsanto, and Arviansyah (2024) argue that universalism also includes a sense of inner peace and harmony in daily life, observable across diverse cultural contexts. Their study further suggests that universalism fosters innovation and enhances perceptions of leadership effectiveness.

Entrepreneurial Leadership (ELS)

Three factors were extracted, explaining 67% of the cumulative variance.

- Factor 1 included loadings on Vision for Business (EO6), Passion for Work (EO5), Push Staff to Act Innovatively (CB1), and Challenges Ways of Doing Business (CB2).
- Factor 2 comprised Take Risks (EO3) and Creative Solutions (EO4).
- Factor 3 included Ideas for New Products/Services (EO2) and Radical Ideas (EO1).

These results reflect dimensions of Entrepreneurial Orientation and Creativity-Supportive Behaviour, indicating that the ELS construct captures both strategic vision and innovative action within leadership contexts.

Table 45. Rotated Component - VAL, ELS (UK Followers)

Variable (VAL)	Component			Variable (ELS)	Component		
	1	2	3		1	2	3
STM	0.617			EO2	0.793		
UNV	0.616			EO1	0.682		
TRD		0.813		EO5		0.784	
CFM		0.629		EO6		0.616	
BNV			0.751	CB2			0.898

Personal Values (VAL)

Three factors were extracted, accounting for 40% of the cumulative variance.

- Factor 1 included loadings on Stimulation and Universalism, representing the dimensions of Openness to Change and Self-Transcendence.
- Factor 2 comprised Tradition and Conformity, reflecting the Conservation value dimension.
- Factor 3 included Benevolence, aligning with Self-Transcendence.

These findings are consistent with the work of Črešnar and Nedelko (2020), who found that values such as Tradition-Conformity and Stimulation are positively associated with leadership aspirations.

Entrepreneurial Leadership (ELS)

Three factors were extracted, explaining 68% of the cumulative variance.

- Factor 1 included loadings on New Products/Services (EO2) and Radical Ideas (EO1).
- Factor 2 comprised Vision for Business (EO6) and Passion for Work (EO5).
- Factor 3 included Challenges Ways of Doing Business (CB2).

Items in Factors 1 and 2 reflect dimensions of Entrepreneurial Orientation, while Factor 3 aligns with Creativity-Supportive Behaviour.

Factor Extraction and Rotation

Tables 44 and 45 present the results of the exploratory factor analysis using maximum likelihood estimation with an unspecified number of factors. The magnitude and scree plot of the eigenvalues initially suggested the presence of six factors. A subsequent analysis was conducted with the number of factors fixed at three, and factor loadings were interpreted using the pattern matrix derived from oblique rotation, which was deemed appropriate due to the anticipated correlations among factors (Allen, Titsworth, & Hunt, 2009).

Analysis of the 26 items resulted in:

- Three factors for VAL, explaining 65.2% of the variance.
- One factor for ELS, accounting for 80% of the variance.

The oblique factor pattern clearly reflected the a priori dimensions. Further iterations were conducted to refine the model by removing cross-loaded items based on a .60 cut-off criterion or items that were theoretically inconsistent with their assigned factor.

Table 46. Rotated Component - ALS (UK Followers)

Variable	Component		
	1	2	3
SA3	0.799		
SA2	0.731		
SA1	0.704		
SA4	0.666		
BP3	0.661		
RT3		0.683	
IM4		0.646	
IM1		0.612	
IM2			0.845

For UK followers, three factors were extracted for authentic leadership, explaining 58% of the cumulative variance. This indicates that the factor structure accounts for a substantial proportion of the variance, suggesting a moderate to strong representation of the authentic leadership construct within this sample.

- Factor 1 showed strong loadings on items SA3, SA2, BP3, SA1, and SA4, which correspond to the dimensions of Self-Awareness and Balanced Processing. The associated questions are listed below.
 - Q22: Knows when it is time to re-evaluate his/her position on important issues (SA3)
 - Q21: Accurately describes how others view his/her work capabilities (SA2)
 - Q20: Seeks feedback to improve interactions with others (SA1)
 - Q23: Shows understanding of how specific actions impact others (SA4)
 - Q19: Listens carefully to different points of view before coming to conclusions (BP3)
- Factor 2 was associated with items RT3, IM4, and IM1, reflecting Relational Transparency and Internalised Moral Perspective.
 - Q9: Encourages everyone to speak their mind (RT3)
 - Q16: Makes difficult decisions based on high standards of ethical conduct (IM4)
 - Q12: Demonstrates beliefs that are consistent with actions (IM1)
- Factor 3 was defined by a strong loading on IM2, representing Internalised Moral Perspective.
 - Q13: Makes decisions based on his/her core beliefs (IM2)

These findings align with the literature on authentic leadership, particularly the emphasis on moral grounding. Alavi (2024) highlights the importance of the internalised moral component, arguing that leaders who lack this dimension are deprived of the internal moral compass necessary to navigate the complexities of modern organisational environments).

Table 47. Rotated Component - ALS (MY Followers)

Variable	Component		
	1	2	3
SA4	0.741		
SA2	0.721		
BP3	0.720		
SA1	0.718		
SA3	0.709		
RT2		0.648	
RT3		0.630	
IM1		0.615	
RT1		0.607	
RT4			0.714
IM3			0.640
BP1			0.629

For Malaysian followers, three factors were extracted in relation to authentic leadership, collectively accounting for 54% of the cumulative variance. This indicates that the identified factors explain more than half of the variability in responses, suggesting a moderate underlying structure for the authentic leadership construct within this sample.

- Factor 1 showed strong loadings on SA4, SA2, BP3, SA1, and SA3, corresponding to the dimensions of Self-Awareness and Balanced Processing.
 - Q23: Shows understanding of how specific actions impact others (SA4)
 - Q21: Accurately describes how others view his/her work capabilities (SA2)
 - Q22: Knows when it is time to re-evaluate his/her position on important issues (SA3)

- Q19: Listens carefully to different points of view before coming to conclusions (BP3)
- Q20: Seeks feedback to improve interactions with others (SA1)
- Factor 2 included loadings on RT2, RT3, IM1, and RT1, reflecting Relational Transparency and Internalised Moral Perspective.
 - Q8: Admits mistakes when they are made (RT2)
 - Q9: Encourages everyone to speak their mind (RT3)
 - Q12: Demonstrates beliefs that are consistent with actions (IM1)
 - Q7: Says exactly what he/she means (RT1)
- Factor 3 was defined by loadings on RT4, IM3, and BP1, representing a blend of Relational Transparency, Balanced Processing, and Internalised Moral Perspective.
 - Q10: Tells staff the hard truth (RT4)
 - Q14: Asks staff to take positions that support his/her core values (IM3)
 - Q17: Solicits views that challenge his/her deeply held positions (BP1)

These findings suggest that Malaysian millennial leaders demonstrate a strong understanding of their strengths, weaknesses, emotional sources, and personal traits, characteristics aligned with Self-Awareness, as defined by Avolio and Gardner (2005). Additionally, they engage in Balanced Processing, analysing relevant information and welcoming opposing views before making decisions (Gardner et al., 2005). Their leadership is further characterised by Relational Transparency, involving self-disclosure and trust-building with followers, and Internalised Moral Perspective, which reflects self-regulation guided by internal moral values rather than external pressures (Northouse, 2013).

A similar factor structure was observed among UK millennial leaders (see Table 38), except for Relational Transparency, which was notably less evident. This dimension, as described by Popper and Lipshitz (2000), reflects a leader's willingness to open themselves to scrutiny and feedback—an aspect that appears to be less prominent in the UK sample.

4.4 Exploratory Factor Analysis

This section presents the findings from the Exploratory Factor Analysis (EFA) and interprets them in light of relevant theoretical frameworks and recent methodological developments. The initial phase involved conducting EFA to identify latent constructs and assess the factor structure within each national sample. A maximum likelihood extraction method was employed alongside oblimin rotation, which produced more substantial and theoretically coherent factor loadings, supporting the presence of correlated latent constructs (Garcia-Santillán and Santana, 2025).

The number of factors retained was determined using the scree plot, which visually indicated the point of inflection in eigenvalues, consistent with Cattell's (1966) criterion and supported by contemporary recommendations (Goretzko, 2025). For the combined analysis of Malaysian and UK samples, oblimin rotation was selected over varimax, based on the assumption of inter-factor correlations. Oblique rotations are theoretically appropriate when constructs are expected to be related (Ahmed and Maruod, 2025).

Recent literature highlights that the choice of rotation method significantly affects the interpretability and reliability of factor solutions. Oblique methods such as oblimin or promax are often preferred over orthogonal approaches when constructs are interdependent (Panaretos et al., 2025). Additionally, maximum likelihood estimation remains a robust technique for continuous data, assuming that multivariate normality is reasonably satisfied (Kyriazos and Poga-Kyriazou, 2023).

Following EFA, a Confirmatory Factor Analysis (CFA) was conducted to validate the factor structure identified during the exploratory phase. CFA enables hypothesis testing of the measurement model and provides fit indices to assess model adequacy (Howard et al., 2025). Both analyses were performed using Jamovi software, which offers an intuitive interface for EFA and CFA and supports advanced modules for structural equation modelling (Sadenova et al., 2025).

To reduce the risk of model overfitting, each national sample was randomly split into two subsets. The Malaysian sample ($N = 139$) was divided into $N = 69$ for EFA and $N = 70$ for CFA, while the UK sample ($N = 210$) was split into $N = 104$ for EFA and the remainder for CFA. Using the same dataset for both EFA and CFA can lead to overfitting, thereby compromising the generalisability of the model (DeVellis, 2017; Kyriazos, 2018). Although increasing the sample size would have been ideal, this was not feasible within the scope of the current study.

Initial data screening focused on scale reliability. The Malaysian sample demonstrated high reliability with Cronbach's alpha (α) = 0.944, McDonald's omega (ω) = 0.946, mean = 3.42, and SD = 0.579. The UK sample yielded $\alpha = 0.957$, $\omega = 0.956$, mean = 3.20, and SD = 0.747. According to Hayes and Coutts (2020), a threshold of 0.70 is recommended, with omega increasingly preferred over alpha for reliability assessment.

Reliability and validity testing confirmed that Cronbach's alpha values between 0.90 and 1.00 indicate excellent internal consistency (Sarmiento and Costa, 2017). Skewness and kurtosis values for all items were within the acceptable range of -1 to +1, confirming approximate normality: skewness = -0.63 (UK), -0.64 (MY); kurtosis = 0.20 (UK), 0.34 (MY).

Both national samples were analysed using a combination of 34 variables, including:

- The Personal Values Scale developed by Schwartz (1992), comprising 10 lower-order values grouped into 4 higher-order dimensions.
- The Authentic Leadership Questionnaire (ALQ) by Walumbwa et al. (2008), consisting of 16 items across 4 higher-order dimensions.
- The Entrepreneurial Leadership Scale (ENTRELEAD) by Renko et al. (2015), comprising 8 items across 2 dimensions.

A total of three factors were identified for each national dataset after excluding low and cross-loading items. For the Malaysian sample ($N = 69$), the KMO value was

0.787, and Bartlett's test of sphericity was significant ($p < .001$). The three factors explained 50.5% of the total variance.

These moderate correlations confirm that the factors are not orthogonal, justifying the use of oblimin rotation over varimax, which assumes uncorrelated factors.

For the UK sample ($N = 104$), the same extraction method was applied. The KMO value was 0.885, and Bartlett's test of sphericity was significant, with the three factors explaining 56.7% of the total variance.

Table 48. Model Fit Measures for both Countries

	RMSEA	χ^2	df
Malaysia	0.06	408	91
UK	0.03	678	78
	RMSEA	χ^2	df

Model Fit

The chi-square test of model fit was non-significant for both national samples, indicating that the hypothesised model did not differ significantly from the observed data. Specifically, for the Malaysian sample, $\chi^2(df = 52) = 66.4$, $p = 0.087$, and for the UK sample, $\chi^2(df = 42) = 47.9$, $p = 0.244$. These results suggest an acceptable model fit.

In line with best practice, additional fit indices were examined to support the robustness of the model:

- Root Mean Square Error of Approximation (RMSEA) = 0.06 (MY) and 0.03 (UK), with 90% confidence intervals within acceptable bounds.
- RMSEA values fall below the recommended cut-off of 0.08, further confirming good model fit.

The RMSEA values support the retention of all remaining items. The coefficient for each scale was measured, and three factors were found to be adequate following the removal of weaker factors.

Given the small sample size (N = 69) for the Malaysian cohort, additional checks were conducted to ensure the robustness of the factor structure. The KMO measure of sampling adequacy and average communality of items were examined (see Table 49). These checks addressed two key assumptions:

1. Sphericity, confirming that variables are sufficiently correlated.
2. Adequate sample size, supported by the KMO statistic.

Table 49. MY Communalities

Variables	Communalities
ALS_RT2 (Admits mistakes when they are made)	0.58
ALS_RT3 (Encourages everyone to speak their mind)	0.53
ALS_BP2 (Analyse data before deciding)	0.59
ALS_BP3 (Listen to different views before reaching conclusion)	0.70
ALS_SA1 (Seek feedback for improved interactions)	0.59
ALS_SA3 (Know when to re-evaluate position on key issues)	0.56
ALS_SA4 (Understand how actions impact others)	0.74
ELS_EO2 (Ideas for new products/services)	0.30
VAL_PWR (Power – social power, authority, wealth)	0.25
VAL_ACH (Achievement – success, capability, ambition, influence on people and events)	0.54
VAL_STM (Stimulation - daring, a varied and challenging life, an exciting life)	0.40
VAL_TRD (Tradition - respect for tradition, humbleness, accepting one's portion in life, devotion, modesty)	0.52
VAL_CFM (Conformity - obedience, honouring parents and elders, self-discipline, politeness)	0.23
VAL_SEC (Security - national security, family security, social order, cleanliness, reciprocation of favours)	0.94

The communality values of each variable provide insight into how well the model accounts for the variance in each item. The average communality was 0.53, which meets the recommended threshold of > 0.50 for small sample sizes, as suggested by Watkins (2018). This indicates that the extracted factors adequately represent the shared variance among the items.

Prior to reaching the overall adequacy of the model, several items were excluded due to low factor loadings:

- ELS_EO3, which pertains to the entrepreneurial leader's risk-taking behaviour, was not retained due to insufficient loading. Although Renko et al. (2015) argue that risk-taking is integral to the identity of entrepreneurial leaders, driving them to pursue opportunities and challenge the status quo, this item did not load strongly onto any factor. The absence of this variable may suggest contextual or cultural nuances in how risk-taking is perceived by followers.
- Similarly, ALS_RT4 ("Tells staff the hard truth"), a key indicator of Relational Transparency in authentic leadership, was excluded due to poor loading. According to Walumbwa et al. (2008), this behaviour reflects a leader's willingness to present themselves authentically, fostering trust through openness. Its omission may imply a tendency among respondents to perceive leaders as less forthcoming, potentially indicating a biased or moderated self-presentation.

These exclusions were based on established criteria, including the removal of items with factor loadings below 0.30, and the retention of items with loadings above 0.40, which are considered more stable and interpretable (Stefana et al., 2025).

Table 50. MY Factor Loadings

	Factor 1 'Reflection'	Factor 2 'Society'	Factor 3 'Empower'
ALS_RT2	0.424		
ALS_RT3	0.470		

ALS_BP2	0.760		
ALS_BP3	0.852		
ALS_SA1	0.679		
ALS_SA3	0.748		
ALS_SA4	0.796		
ELS_EO2	0.466		
VAL_PWR			0.493
VAL_ACH			0.659
VAL_STM			0.583
VAL_TRD		0.532	
VAL_CFM		0.442	
VAL_SEC		0.969	

Factor one includes eight items related to Relational Transparency, Balanced Processing and Self-Awareness (ALS_RT2, ALS_RT3, ALS_BP2, ALS_BP3, ALS_SA1, ALS_SA3, ALS_SA4) that can be interpreted as a higher-order “reflective openness” or “deliberative self-awareness” construct. In practical leadership terms, this factor represents leaders who both know themselves and deliberately solicit, weigh, and integrate others’ perspectives prior to decisions. This synthesis is theoretically coherent with the Authentic Leadership framework, where Relational Transparency, Balanced Processing and Self-Awareness are distinct but interrelated domains and part of a higher-order authentic leadership factor. The pattern follows the authentic leadership’s theorised interrelated domains under a higher order authentic leadership construct. ELS_EO2 loaded at 0.466 on Factor 1 indicating that entrepreneurial leadership in this sample is associated with proactive idea generation and innovation. This supports Renko et al.’s (2015) conceptualisation of entrepreneurial leadership as opportunity-focused and creativity driven. Factor two contains three of the conservation values, VAL_TRD, VAL_CFM and VAL_SEC that can be interpreted as “conservation orientation” or “stability and social order”, representing a motivational tendency to preserve existing arrangements and minimise uncertainty. This is theoretically consistent

with Schwartz's (2012) circumplex model, where these values are adjacent and share underlying motivational goals. Factor three that represent values of power, achievement and stimulation represent a "dynamic self-enhancement" or empowering oneself prioritising personal success, influence, and novelty-seeking behaviours. This suggests respondents perceive these values as interrelated, forming a broader orientation toward assertive, achievement-driven, and exploratory behaviour.

Table 51. UK Communalities

Variables	Communalities
ALS_RT2 (Admits mistakes when they are made)	0.64
ALS_RT3 (Encourages everyone to speak their mind)	0.70
ALS_RT4 (Tells staff the hard truth)	0.46
ALS_RT5 (Display emotions exactly in line with leader's feelings)	0.34
ALS_IM2 (Makes decisions based on leader's core values)	0.68
ALS_IM3 (Asks staff to take positions that support leader's core values)	0.35
ALS_BP3 (Listens carefully to different points of view before coming to conclusions)	0.74
ALS_SA3 (Know when it is time to re-evaluate leader's position on important issues)	0.61
ALS_SA4 (Show understanding of how specific actions impact others)	0.55
ELS_CB1 (Challenge and push staff to act in a more innovative way)	0.72
ELS_CB2 (Want staff to challenge the current ways they do business)	0.73
VAL_ACH (Achievement – success, capability, ambition, influence on people and events)	0.39
VAL_BNV (Benevolence - helpfulness, honesty, forgiveness, loyalty, responsibility)	0.44

The average communality for the UK sample is 0.56 for the set of variables.

ALS_RT2, ALS_RT3, ALS_RT4 and ALS_RT5 is part of the Relational Transparency dimension that strengthens the bond between leaders and followers by presenting the leader's true self (Cervo et al., 2016). ALS_IM2 and ALS_IM3 involve leader's consistent interaction between values and actions (Walumbwa et al., 2008). Two of entrepreneurial focus variables (ELS_CB1, ELS_CB2) emphasise the importance

of the focus on the leader with specific actions to encourage followers to adopt more innovative approaches by challenging existing practices and motivating them to critically evaluate and improve current business processes. These behaviour patterns are associated with entrepreneurial leadership construct thus the item loadings are anticipated. Although these represent a small proportion of the eight variables that contribute to the entrepreneurial orientation dimension.

Achievement has a strong positive link to ELS_CB1 and ELS_CB2 because these behaviours reflect ambition and striving for excellence. Benevolence may have a moderate or context-dependent link, supporting innovation when it enhances group welfare but potentially resisting disruptive change if it threatens harmony. Benevolence is a commonly acknowledged value that is part of the core European value orientation (Witte, Stanciu and Boehnke, 2020).

Table 52. UK Factor Loadings

	Factor 1 'Reflection'	Factor 2 'Achievement'	Factor 3 'Transparency'
ALS_RT2	0.752		
ALS_RT3	0.780		
ALS_RT4			0.470
ALS_RT5			0.477
ALS_IM2			0.803
ALS_IM3			0.500
ALS_BP3	0.850		
ALS_SA3	0.765		
ALS_SA4	0.585		
ELS_CB1		0.613	
ELS_CB2		0.818	
VAL_ACH		0.630	
VAL_BNV	0.560		

Loadings are reported above the threshold of 0.4. The results highlighted three factors that explained 56.7% of the total variance across 13 observed variables and the biggest factor accounted for 43.0% of the variance. The KMO value was 0.885, and Bartlett's test of sphericity was significant ($p < .001$).

Items from Relational Transparency (openness, truthful self-disclosure), Balanced Processing (actively soliciting and weighing others' views), Self-Awareness (recognising one's strengths/limits and seeking feedback) and Benevolence (contributing to the welfare of those that are close) load together and the merged dimension can be interpreted as a "transparent reflective leadership" factor. In practice, it captures leaders who know themselves (SA), openly show themselves to others (RT), and fairly consider divergent evidence before deciding (BP) i.e., self-insight enacted through open, fair information processing in relationships. This is theoretically coherent with the authentic leadership, in which these domains are distinct facets of a higher-order authentic leadership construct (Walumbwa et al., 2008). Factor 2 is interpreted as "achievement-driven innovation leadership", combining a self-enhancement success motive with leader behaviours that challenge routines and stimulate innovation, consistent with entrepreneurial leadership theory. Factor 3 is interpreted as "values-congruent transparency", integrating open, honest self-disclosure (Relational Transparency) with values-guided decision-making (Internalised Moral Perspective), consistent with the Authentic Leadership Questionnaire's theorised multidimensional structure under a higher-order authentic leadership factor. The values of Achievement and Benevolence can be linked to entrepreneurial behaviours such as innovation and challenging norms as prescribed by Curtin, Coelho and Hanel (2024) and in shaping authentic leaders in the domain of relational transparency and moral perspective.

4.5 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA), a component of structural equation modelling, was employed to assess the relationships between observed indicators and their underlying latent constructs. Latent variables represent theoretical concepts that are not directly observable but are inferred through measured indicators (Ursachi, Horodnic, and Zait, 2015; Diamantopoulos and Siguaw, 2009). CFA is particularly advantageous in bridging theory and empirical observation by evaluating the degree to which sample data fit a hypothesised model (Mueller and Hancock, 2001). Unlike Exploratory Factor Analysis (EFA), which is primarily used for theory generation, CFA serves to test and validate existing theoretical structures (Matsunaga, 2010).

The primary objective of CFA is to examine construct validity and model fit using indices such as Chi-square (χ^2), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker–Lewis Index (TLI) (Steenkamp and Baumgartner, 2000; Brown, 2006). Despite its robustness, CFA models often fail to achieve ideal fit indices even for well-established multifactor instruments, largely due to high inter-factor correlations and complex loading patterns (Marsh et al., 2010; Dicke et al., 2018; Graham, Guthrie, and Thompson, 2003).

Distinction Between EFA and CFA

Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) serve distinct purposes in scale development and validation. EFA is a data-driven approach used to uncover underlying factor structures without imposing a predefined model. It identifies latent constructs by examining patterns of correlations among observed variables, where the number and nature of factors are not known in advance (Brown and Moore, 2012). In contrast, CFA is grounded in theory and used to test hypothesized relationships between observed measures and latent variables. It involves a priori specification of the factor structure, allowing researchers to assess how well the data fit a theoretically informed model (Byrne, 2005). As Brown and Moore (2012, p. 2) note, “EFA and CFA differ fundamentally by the number and nature of a priori specifications and restrictions

made on the latent variable measurement model.” This distinction underscores the complementary roles of EFA in model exploration and CFA in model confirmation within structural equation modelling.

In this study, CFA was applied to evaluate the internal structure of three established instruments: the Authentic Leadership Questionnaire (ALQ; Walumbwa et al., 2008), ENTRELEAD (Renko et al., 2015), and the Personal Values scale (Sagiv and Schwartz, 2022). Data were drawn from two samples: Malaysian leaders and followers (N = 70) and UK leaders and followers (N = 104). The hypothesised models comprised 14 latent variables in the Malaysian sample: Self-awareness, Balanced Processing, Relational Transparency, Entrepreneurial Orientation, Power, Achievement, Stimulation, Tradition, Conformity, and Security. The UK model denoted 13 latent variables corresponding to Self-awareness, Balanced Processing, Relational Transparency, Creativity Support Behaviour, Achievement and Benevolence. The analysis aimed to determine whether these models demonstrated acceptable fit and whether parameter estimates were statistically significant. Maximum likelihood estimation was employed, consistent with recommendations by Jöreskog and Sörbom (2004), under the assumption that measurement error is random and that indicator loadings reflect latent variable influence (Brown and Moore, 2012).

First-Order CFA Model Evaluation

Following the exploratory phase, the EFA-derived structure was subjected to CFA to validate the measurement model and assess its theoretical coherence. This two-step approach is widely recommended for establishing construct validity, as EFA identifies the underlying factor structure while CFA tests its fit against empirical data using a separate sample or split dataset (Hu and Bentler, 1999; Hair et al., 2019). A first-order confirmatory factor analysis (CFA) was conducted to test a three-factor model comprising 14 items representing the constructs of authentic leadership, entrepreneurial leadership, and personal values for the Malaysian sample and 13 items for the UK sample. The samples comprised participants from

Malaysia (N=70) and the United Kingdom (N=106). Overall, the models demonstrated weak fit, with fit indices falling below the recommended thresholds.

For the UK sample, the fit indices were CFI = 0.881, TLI = 0.850, and RMSEA = 0.102. The chi-square statistic was significant ($\chi^2=131$, $df=62$, $p<.001$). RMSEA exceeded the recommended threshold of 0.08, and CFI/TLI values were below the ideal ≥ 0.95 benchmark (Hu and Bentler, 1999). These results suggest that certain latent variables did not adequately capture their intended constructs. Similar challenges have been reported in prior studies; for example, Renko et al. (2008) improved model fit by reducing ENTRELEAD items from 10 to 8, while Sagiv and Schwartz (2022) noted that some personal values required merging with adjacent values (e.g., Benevolence and Universalism) to achieve acceptable fit.

Similarly, the Malaysian sample reported CFI = 0.918, TLI = 0.900, and RMSEA = 0.078. The chi-square statistic was not significant ($\chi^2=107$, $df=75$, $p=0.009$), further confirming poor model fit. These results suggest that a unidimensional structure does not adequately capture the complexity of the three constructs, warranting further exploration of multidimensional or hierarchical models. Full model details are presented in Table 52.

Table 53. CFA (UK, MY Samples)

	χ^2	df	χ^2/df	CFI	TLI	SRMR	RMSEA
UK Sample							
First-order	131	62	2.11	0.881	0.850	0.062	0.102
Second-order	30.1	22	1.4	0.978	0.955	0.035	0.058
MY Sample							
First-order	107	75	1.4	0.918	0.900	0.069	0.078
Second-order	38.5	31	1.2	0.977	0.960	0.040	0.058

The CFA results indicated that the second-order model, which posits that first-order factors load onto a higher-order latent construct, provided an acceptable fit to the data, consistent with best practices in leadership and values research (Marsh et al., 2009; Goretzko et al., 2024).

Second-Order CFA Model Evaluation

To assess convergent and dominant validity, a first-order CFA model was initially tested using three factors derived from exploratory factor analysis (EFA), as illustrated in Figure 26 and Figure 28. Subsequently, a second-order CFA model was evaluated and demonstrated acceptable overall fit (Figures 30 and 31). The Comparative Fit Index uses population non-centrality parameters to define an index (Bentler, 1990) has a value of CFI = 0.978 (UK), 0.977 (MY) and Tucker–Lewis Index (TLI) = 0.955 (UK), 0.960 (MY) exceeded the recommended threshold of 0.95 (Hu and Bentler, 1999), indicating strong model fit. The Standardised Root Mean Square Residual (SRMR) = 0.035 (UK), 0.040 (MY) were well below the 0.08 criterion, suggesting minimal residual discrepancies. The Root Mean Square Error

of Approximation (RMSEA) = 0.058 (UK and MY) fell within the acceptable range (< 0.08) as prescribed by Schreiber et al. (2006), below the ideal benchmark of 0.06, indicating good approximation error. Brown (2015) argues that RMSEA is relatively insensitive to sample size and therefore the RMSEA and SRMR values are sufficient to select the best fitting model. Browne and Cudeck (1993, p. 144) propose the following guidance for interpreting RMSEA values. "Practical experience has made us feel that a value of the RMSEA of about 0.05 or less indicates a close fit of the model in relation to the degrees of freedom...We are also of the opinion that a value of about 0.08 or less... would indicate a reasonable error of approximation and would not want to employ a model with a RMSEA greater than 0.1." This sentiment is equally supported by Farooq (2016) confirming that RMSEA results between 0.08 and 0.10 represent a mediocre fit. The chi-square statistic was significant ($\chi^2 = 30.1$, $df = 22$) and the χ^2/df ratio of 1.4 was below the recommended upper limit of 3 (Shumacker and Lomax, 2016) for UK and ($\chi^2 = 38.5$, $df = 31$) and the χ^2/df ratio of 1.2 for Malaysia, further supporting model adequacy.

Justification for Item Removal in CFA Analysis

Certain alterations to the factors were undertaken to improve the model fit. These changes were carried out with the modification indices of the factor loadings available in Jamovi. MacCallum (1986) emphasises that any changes in the specification of a model must be based on theory or empirical studies.

Items RT3 ("encourages everyone to speak their mind") and RT4 ("tells staff the hard truth") were excluded from the Relational Transparency dimension, and BP3 ("listens carefully to different points of view before coming to conclusions") was removed from the Balanced Processing dimension of the Authentic Leadership Questionnaire (ALQ) within the UK model following confirmatory factor analysis. These exclusions were based on both statistical inadequacies and theoretical considerations. Statistically, RT3 and RT4 consistently demonstrated low standardised factor loadings and high residuals, indicating poor alignment with the latent construct of relational transparency (Avolio, Wernsing, and Gardner, 2018). Furthermore, the items including BP3 also contributed to suboptimal model fit

indices, and their removal improved the overall fit of the measurement model, consistent with best practices in scale refinement (Butterworth, Black, and Terry, 2024). The two Entrepreneurial Leadership items (CB1, CB2) are retained in support of Renko et al.'s (2015) study that indicated a strong positive correlation between entrepreneurial leadership scale and creativity support behaviour scale.

Theoretically, RT3 and RT4 present interpretive ambiguity across cultural contexts. While the phrase "encourages everyone to speak their mind" and "tells staff the hard truth" may imply openness in some settings, it can also be construed as bluntness or insensitivity, which diverges from the construct's intended emphasis on constructive openness and mutual respect (Born, Correa and George, 2025). This concern is echoed in cross-cultural psychometric evaluations, where relational transparency items have shown variable performance, suggesting the need for contextual adaptation (Grobler and Grobler, 2024). BP3, while related to information processing, overlaps with relational behaviour, creating ambiguity in factor interpretation. Scholars caution that items causing conceptual redundancy or cross-loading should be removed to preserve construct clarity and discriminant validity (Hair et al., 2019). Moreover, Walumbwa et al. (2008) acknowledged the necessity of content validity assessments and item reduction during the original development of the ALQ, reinforcing the legitimacy of item-level scrutiny.

In line with recommendations for ongoing construct validation and refinement of leadership measures (Avolio, Wernsing, and Gardner, 2018), the removal of RT3, RT4 and BP3 enhance the psychometric robustness of the ALQ and ensures greater conceptual clarity within the relational transparency and relational transparency dimensions. Studies on scale refinement confirm that eliminating poorly performing items often improves global fit and internal consistency (Netemeyer, Bearden and Sharma, 2003; Guvendir and Ozkan, 2022).

CFA revealed that these items exhibited low factor loadings and contributed to poor model fit, suggesting they may not adequately represent the latent construct of internalised moral perspective. Their removal resulted in improved fit indices and a more coherent factor structure, consistent with recommendations for scale

refinement in leadership research (Kyriazos and Poga-Kyriazou, 2023). Scholars have argued that authentic leadership should reflect a leader's ability to act consistently with internal moral standards while respecting the autonomy and values of others (Lux and Lowe, 2025). The inclusion of items that suggest encouraging staff to adopt the leader's values risks conflating authenticity with ideological persuasion, which may not align with the construct's ethical foundations (Born, Correa and George, 2025).

The item 'Achievement', 'Power' and 'Security' within the Personal Values construct from the Malaysian sample were removed due to its low standardised factor loading, which consistently fell below the acceptable threshold of 0.50. According to Hair et al. (2010), items with loadings below 0.50 contribute minimally to the latent construct and may compromise the overall model fit and construct validity. Furthermore, Byrne (2016) and Kline (2016) recommend the removal of items that do not meet the minimum loading criteria, as they may introduce measurement error and reduce the reliability of the construct.

The decision to remove the items is also supported by Larwin and Harvey (2012), who advocate for systematic item reduction in structural equation modelling to enhance model parsimony without compromising conceptual integrity. Their approach emphasises the importance of retaining items that meaningfully contribute to the latent construct while eliminating those that do not. Moreover, Guvendir and Ozkan (2022) highlight that item removal strategies, particularly for items with low loadings or cross-loadings, can improve the explained variance and reliability of the scale.

The exclusion of achievement, power and security may also reflect cultural and contextual influences on leadership value hierarchies. Prior research indicates that while these values are theoretically central to Schwartz's Self-Enhancement and Conservation dimensions, their salience varies across cultural settings and organisational contexts (Schwartz, 2012; Albrecht et al., 2020). In collectivist cultures, for example, achievement may be subsumed under broader relational or normative values, reducing its distinctiveness in factor structures (Kennedy and

Mansor, 2000; Sarid, 2016). Studies on Schwartz values note inherent conflicts and tensions between these values and others (e.g., openness to change vs. conservation), which can distort factor structure in applied settings such as leadership or workplace behaviour (Schwartz, 1992; Czapryna et al., 2024). Empirical research adapting Schwartz values to work contexts (e.g., Work Values Questionnaire) reports that while all ten values are theoretically distinct, some items (Achievement, Power, Security) may underperform in CFA due to cultural or organisational framing, requiring refinement or removal for model validity (Consiglio et al., 2017).

Following the item modifications, the UK and Malaysian samples demonstrated improved model fit, with the following indices shown in Table 54.

Table 54. CFA Factor Loadings (MY Sample)

Factor	Item	Loadings
ALS_RT	RT2	0.891
	RT3	0.793
ALS_BP	BP2	0.604
	BP3	0.759
ALS_SA	SA1	0.620
	SA3	0.910
	SA4	0.693
ELS_EO	EO2	0.961
VAL_OC	STM	0.683
VAL_CN	CFM	0.607
	TRD	0.509

CFA of the reflective measurement model indicated standardised loadings ranging from .509 to .961. ALS_RT showed strong loadings of .891 (RT2) and .793 (RT3), producing AVE = .711 and CR = .831, which support convergent validity and reliability. ALS_SA yielded loadings of .620 (SA1), .910 (SA3), and .693 (SA4), with AVE = .564 and CR = .791, also meeting recommended thresholds. ALS_BP

exhibited loadings of .604 (BP2) and .759 (BP3), with AVE = .470 and CR = .637, indicating marginal convergent validity. VAL_CN, measured by TRD (.509) and CFM (.607), produced AVE = .314 and CR = .476, suggesting limited convergent validity. Two constructs were single indicator: ELS_EO (EO2 = .961; λ^2 = .924) and VAL_OC (STM = .683; λ^2 = .466).

Table 55. CFA Factor Loadings (UK Sample)

Factor	Item	Loadings
ALS_RT	RT2	0.763
	RT5	0.690
ALS_IM	IM2	0.635
	IM3	0.895
ALS_SA	SA3	0.920
	SA4	0.970
ELS_CB	CB1	0.825
	CB2	0.979
VAL_SE	ACH	0.649
VAL_ST	BNV	0.799

Standardised loadings for the UK sample ranged from 0.635 to 0.979. ALS_SA demonstrated strong loadings (SA3 = 0.920; SA4 = 0.970), yielding AVE = 0.894 and CR = 0.944, which exceed recommended thresholds. Similarly, ELS_CB exhibited high loadings (CB1 = 0.825; CB2 = 0.979), with AVE = 0.820 and CR = 0.901. ALS_IM and ALS_RT achieved acceptable convergent validity (AVE = 0.602 and 0.529, respectively) and reliability (CR = 0.752 and 0.765). Two constructs were measured by a single indicator: VAL_SE (ACH = 0.649; λ^2 = 0.421) and VAL_ST (BNV = 0.799; λ^2 = 0.638).

Collectively, these indices suggest that the second-order CFA model provides a statistically defensible and theoretically coherent representation of the data. This supports prior findings by Walumbwa et al. (2008), who proposed a second-order structure for the authentic leadership construct. The current model integrates six

items from authentic leadership, five from entrepreneurial leadership, and five personal value items; tradition, security, universalism, and benevolence (common in South Asian cultures), along with self-direction (prevalent in English-speaking nations), as identified by Sagiv, Schwartz, and Arieli (2011). Furthermore, the authentic leadership scale has demonstrated cultural congruence in prior studies (Khilji et al., 2015; Bakari and Hunjra, 2017), reinforcing its applicability across diverse national contexts.

However, not all factors identified in EFA were retained in the CFA second-order model. Specifically, the personal values of security and achievement were excluded due to low standardised loadings and poor contribution to model fit. This outcome suggests that these values did not exhibit sufficient convergent validity within the hypothesised higher-order structure (Anderson and Gerbing, 1988). Such refinement is common in measurement model development, as items or factors that fail to meet statistical and theoretical criteria are removed to improve construct validity and parsimony (Byrne, 2016; Goretzko et al., 2024).

Table 56. Correlation Matrix

	Malaysia			UK		
	ALS	ELS	VAL	ALS	ELS	VAL
ALS		0.723	0.451		0.733	0.588
ELS	0.723		0.576	0.733		0.653
VAL	0.451	0.576		0.588	0.653	

The correlation matrix reveals meaningful relationships among the three constructs:

ALS – VAL:

Malaysia: 0.451, UK: 0.588

This indicates a moderately strong positive correlation between authentic leadership and personal values for both countries. It suggests that individuals who score higher on authentic leadership also tend to endorse personal values

more strongly. This supports the theoretical premise that authentic leaders are guided by deeply held personal values (Walumbwa et al., 2008).

The UK shows a notably stronger link between ALS and VAL (Values-based Leadership). This implies UK leaders who exhibit authentic leadership are more likely to align with values-driven behaviours compared to Malaysian leaders.

ELS – VAL:

Malaysia: 0.576, UK: 0.653

Similarly, entrepreneurial leadership is positively associated with personal values. This implies that entrepreneurial leaders may also be influenced by their value systems, particularly those related to innovation, autonomy, and social responsibility (Renko et al., 2015).

Again, the UK demonstrates a stronger correlation, indicating entrepreneurial leadership in the UK is more closely tied to values orientation than in Malaysia.

ELS – ALS:

Malaysia: 0.723, UK: 0.733

This is a very strong positive correlation, suggesting substantial overlap between entrepreneurial and authentic leadership. It may reflect shared characteristics such as self-awareness, proactive behaviour, and value-driven decision-making. The strength of this relationship supports the idea that entrepreneurial leadership can be conceptualized as an extension or contextual expression of authentic leadership in dynamic environments (Caza et al., 2010).

Although both contexts show a strong positive correlation between ALS (Authentic Leadership Style) and ELS (Entrepreneurial Leadership Style), the UK is slightly higher. This suggests UK leaders may integrate entrepreneurial behaviours with authentic leadership slightly more strongly than Malaysian leaders.

Significance of These Correlations

1. Convergent Validity:
 - a. The strong correlations among ALS, ELS, and VAL support convergent validity, indicating that these constructs are related and may share underlying dimensions such as integrity, self-direction, and ethical decision-making.
2. Theoretical Integration:
 - a. These relationships provide empirical support for integrating personal values into leadership models. They reinforce the notion that leadership behaviours are not only strategic but also deeply rooted in individual value systems.
3. Model Justification:
 - a. The strength of these correlations justifies the use of a second-order CFA model, where ALS, ELS, and VAL can be treated as interrelated but distinct dimensions contributing to a higher-order construct (e.g., value-driven leadership).

Figure 26. First Order CFA (UK)

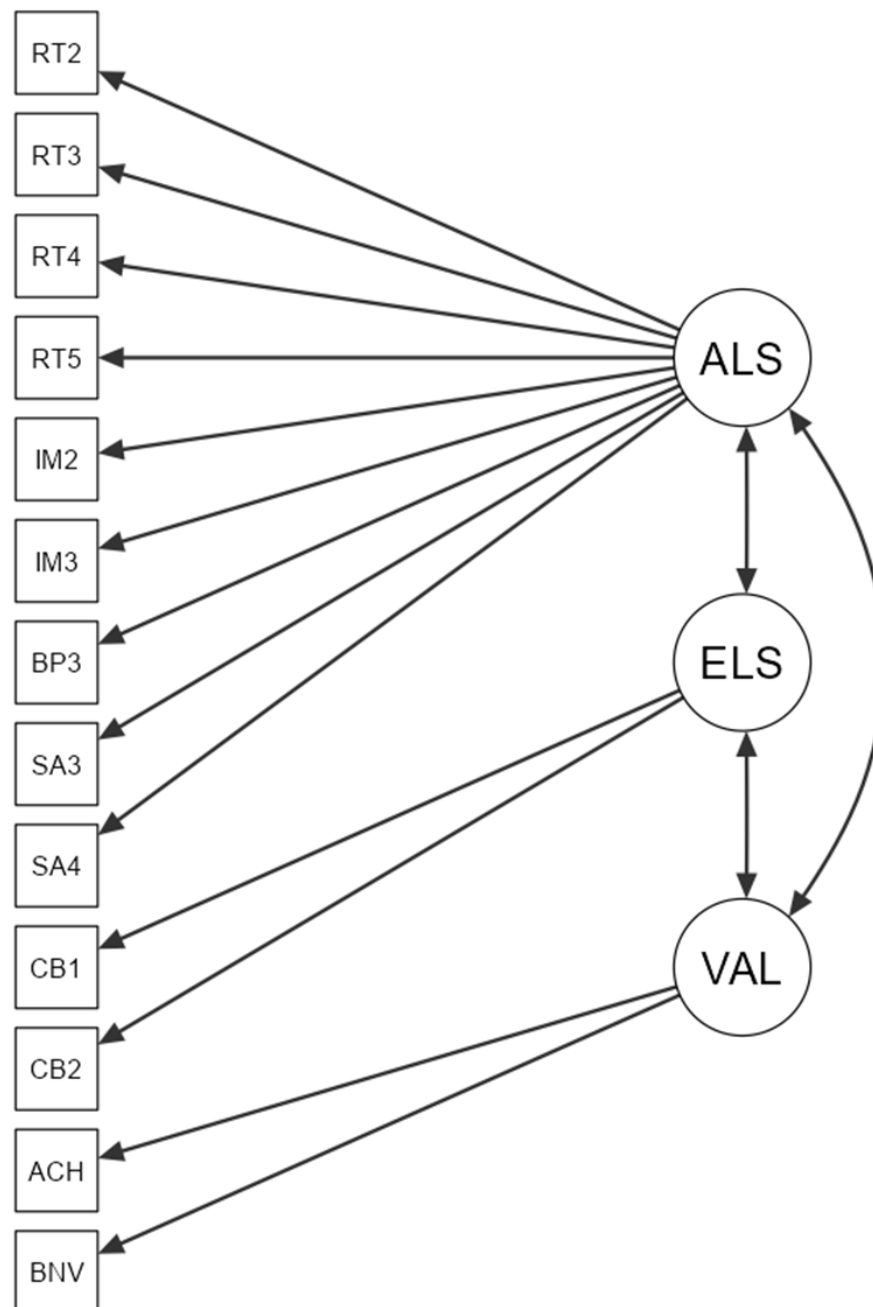


Figure 27. First Order CFA (MY)

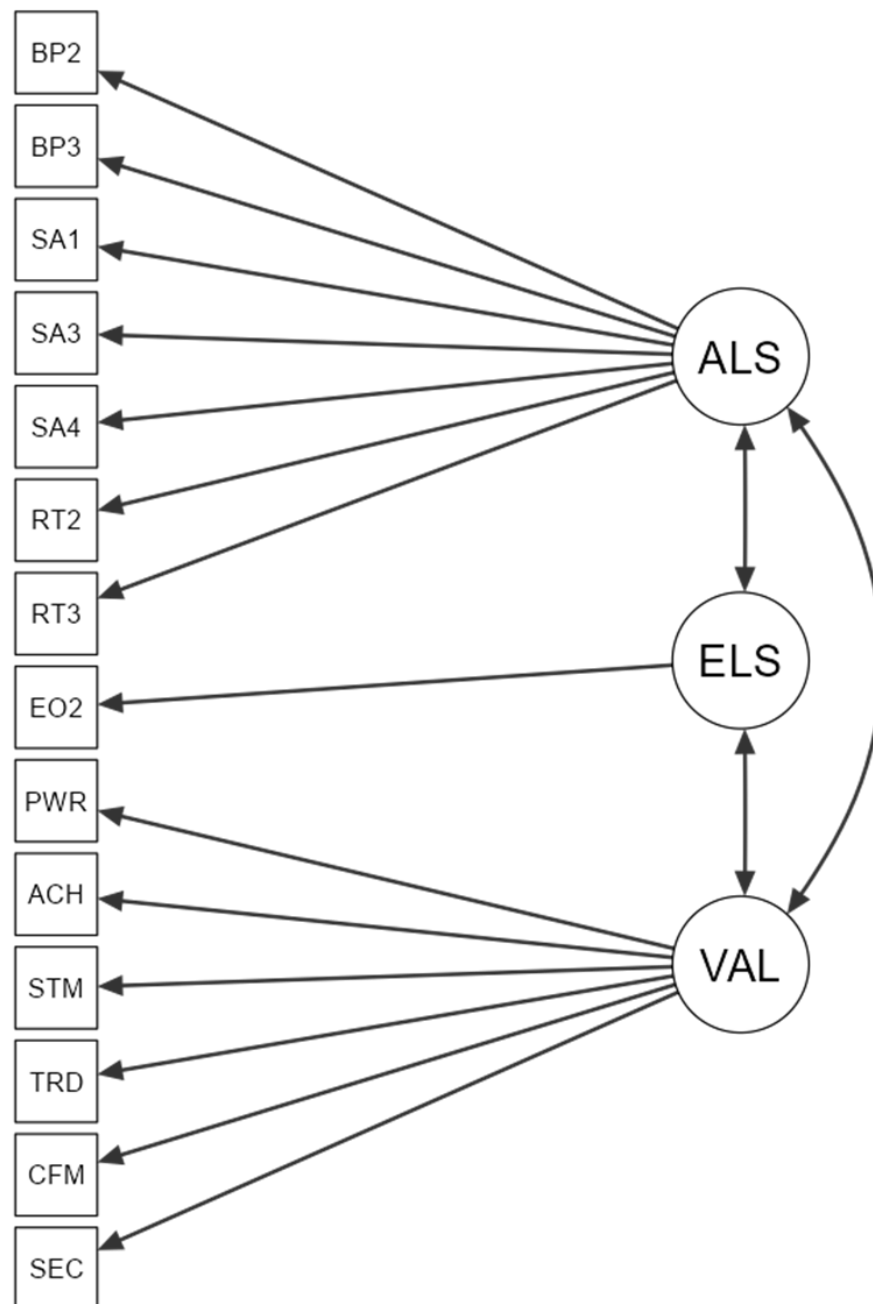


Figure 28. Second Order CFA (UK)

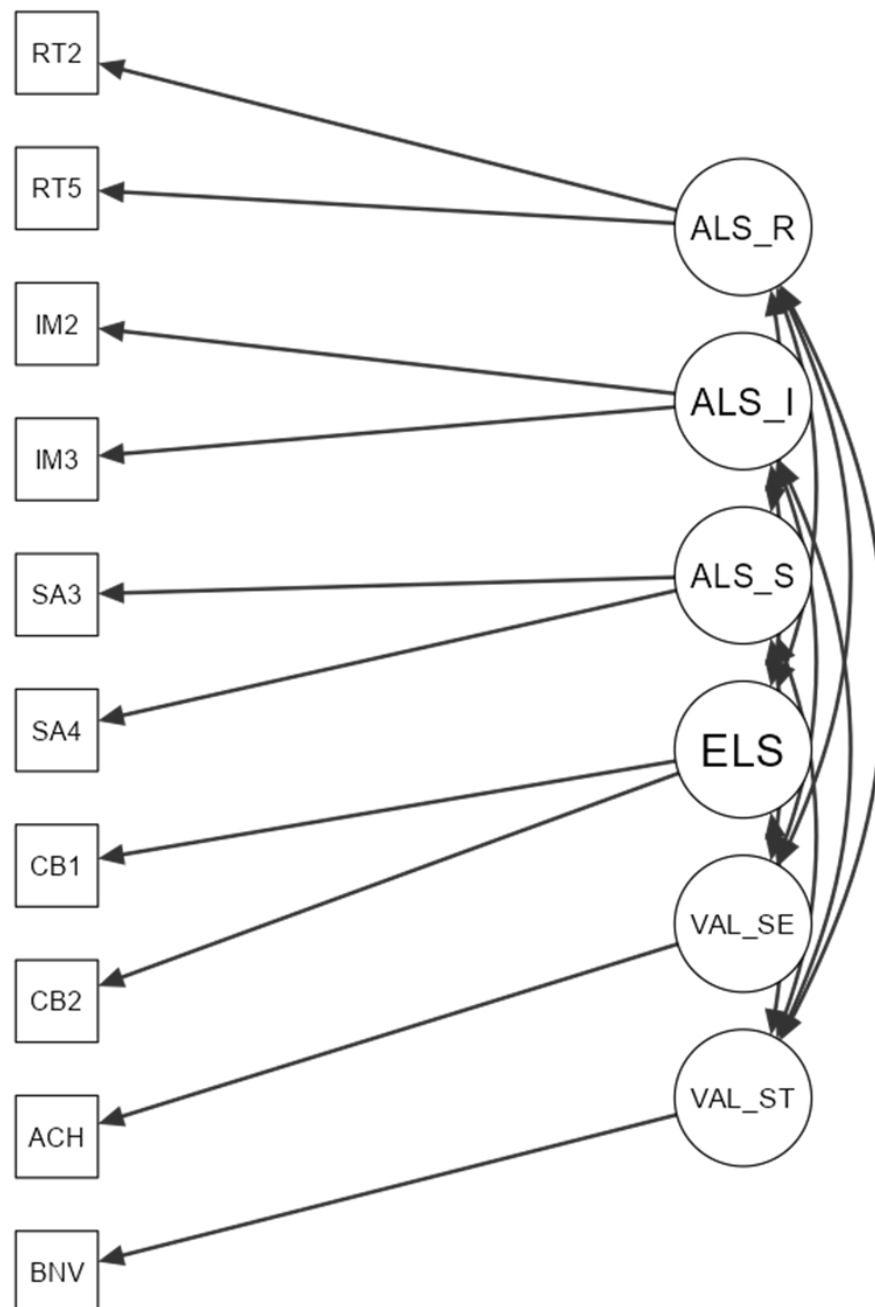
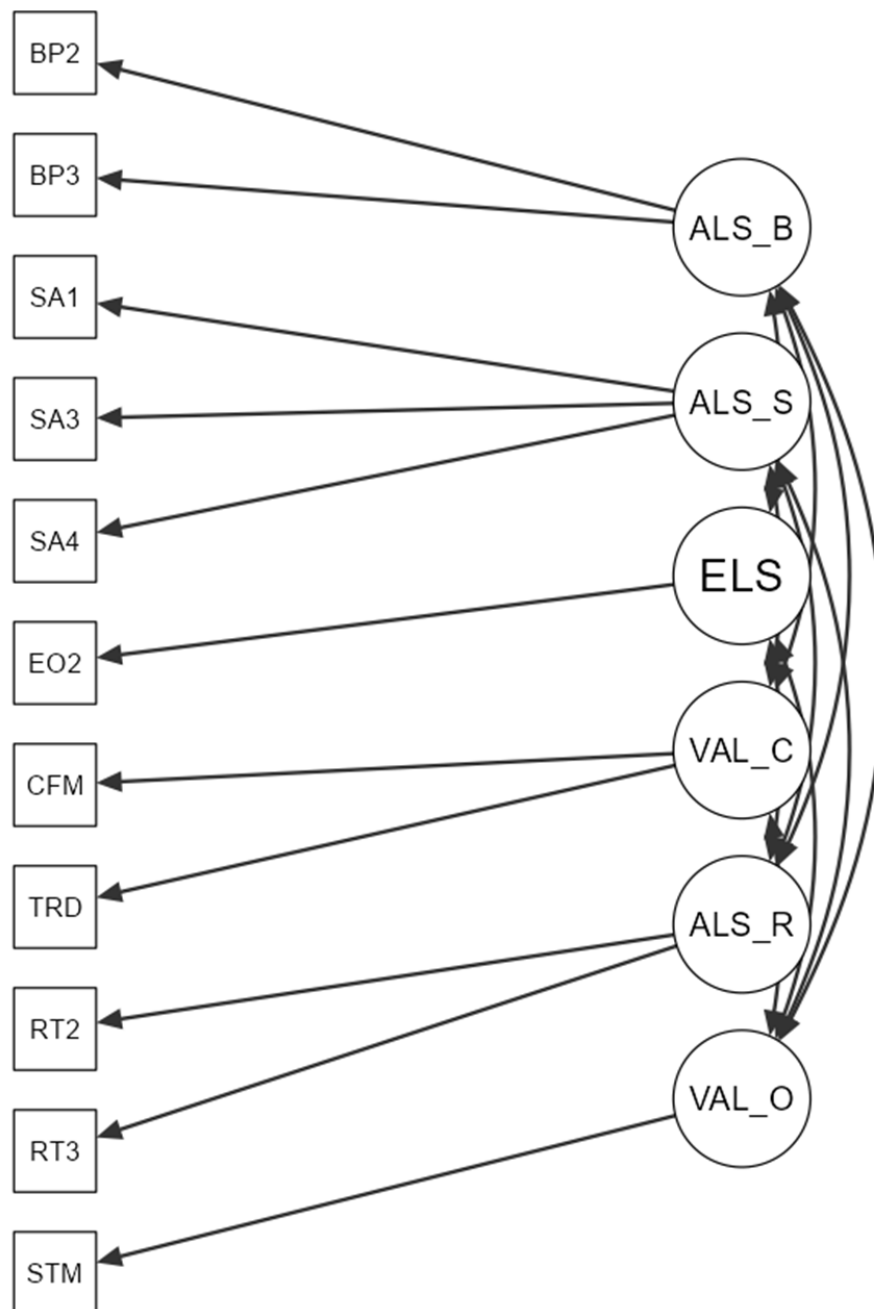


Figure 29. Second Order CFA (MY)



4.6 Additional Results

The final three survey items examined (i) the extent to which leaders influence follower behaviour, (ii) the application of widely used software tools such as Microsoft Excel and Access, and (iii) the implementation of bespoke software solutions. The results of this analysis are summarised in Table 57.

Table 57. Impact of Leaders and Technology

	UK	MY
Positive impact of leaders (followers*)	56%	57%
Use of Excel/Access (leaders**)	77%	90%
Use of Excel/Access (followers***)	64%	72%
Use of custom software (leaders**)	58%	72%
Use of custom software (followers***)	55%	64%

* Based on the question: Has a positive impact on staff (study II).

** Based on the questions: I use Microsoft products such as Excel and/or Access for staff data analysis (study I) and I use specialised software for staff data analysis (study I).

*** Based on the questions: He/she uses Microsoft products such as Excel and/or Access for staff data analysis (study II) and He/she uses specialised software for staff data analysis (study II).

The data reveal that 79 respondents, representing 56% of UK followers (N = 141), reported experiencing a consistently positive impact from their leaders. In comparison, 41 Malaysian followers (N = 72) indicated a similar positive influence, equating to 57% of the sample. This suggests that the perceived effectiveness of millennial leadership is marginally higher in the Malaysian context, with a difference of approximately 1% compared to the UK.

Regarding technological adoption, 53 UK leaders (N = 69) affirmed the use of Microsoft Excel and Access, accounting for 77% of the group. Among Malaysian leaders (N = 67), 60 respondents (90%) reported utilising these applications. When

considering the use of specialised software, 40 UK leaders (58%) acknowledged its application, compared to 48 Malaysian leaders (72%).

From the followers' perspective, 90 UK respondents (64%) and 52 Malaysian respondents (72%) reported the use of Microsoft software. In terms of custom software, 77 UK followers (55%) and 46 Malaysian followers (64%) indicated its use. These findings collectively suggest a higher overall adoption of workplace technology in the Malaysian context, both from leadership and follower perspectives.

This trend aligns with the millennial characteristics identified by Kanter (2001), who emphasised the role of technology as a catalyst for change. The findings also resonate with Frandsen (2009), who described millennials as technologically adept, and with Holt, Marques and Way (2012) and Seldon (2014), who highlighted technology's role in maintaining connectivity. Furthermore, Hershatter and Epstein (2010) noted that technology facilitates integration with one's environment, reinforcing the relevance of these findings.

4.7 Comparative Analysis and Hypotheses

This comparative analysis examines the perspectives of leaders and followers in the United Kingdom and Malaysia, focusing on key dimensions such as descriptive statistics, leadership impact and technological adoption as seen in Table 58.

Table 58. Comparative Analysis

Descriptive statistics	UK Leaders (N=69)	UK Followers (N=141)	MY Leaders (N=67)	MY Followers (N=72)
Age	31-35 (36%)	20-30 (33%)	26-30 (33%)	20-30 (49%)
Gender	Female (52%)	Female (52%)	Male (54%)	Female (58%)
Qualification	College/Uni (56%)	College/Uni (57%)	College/Uni (70%)	College/Uni (72%)
Position	GM/DH (50%)	N/A	OP/GM (51%)	N/A

Note: Position – GM = General Manager, DH = Department Head, OP = Owner/partner.

The data indicate that the highest proportion of age differences within the samples from the two countries places UK respondents predominantly in the 31–35 age bracket, whereas Malaysian leaders are more commonly situated within the 26–30 age range. However, a comparable age distribution is observed among followers in both national contexts.

The outcomes of the factor analysis provide evidence of the suitability of the data for further analysis, as indicated by the Kaiser-Meyer-Olkin (KMO) values across all three variables in both cultural contexts. These values validate the adequacy of the sample size, consistent with the recommendations of Shrestha (2021). The Exploratory Factor Analysis (EFA) was conducted using half of the sample comprising leaders and followers from both the UK and Malaysia, followed by Confirmatory Factor Analysis (CFA) on the remaining half.

In both national samples, the KMO values exceeded the minimum guideline of 0.50 (Field, 2005), confirming the appropriateness of the data for factor analysis. The factors identified through EFA offer valuable insights for decision-makers, enabling them to focus on a refined set of dimensions rather than a broader, less targeted array (Shrestha, 2021).

In the UK sample, CFA analysis related to Authentic Leadership Style (ALS) revealed four key dimensions: Internalised Moral Perspective, Relational Transparency and Self-Awareness. For Entrepreneurial Leadership Style (ELS), the UK data highlighted Creative Supportive Behaviour as a distinct category. In contrast, Malaysian respondents emphasised Balanced Processing, Relational Transparency and Self-Awareness within ALS, while ELS was represented by a single item: Entrepreneurial Orientation.

The CFA confirmed a well-fitting model for both countries, comprising six factors and ten items for the UK and six factors and eleven items for Malaysia. These included: Relational Transparency (2 items), Self-Awareness (3 items), Balanced Processing (2 items), Entrepreneurial Orientation (1 item), and three personal values i.e. Tradition, Conformity, and Stimulation for Malaysia. UK includes Relational Transparency (2 items), Self-Awareness (2 items), Internalised Moral

Processing (2 items), Creativity Supportive Behaviour (2 items), and two personal values i.e. Achievement and Benevolence.

The analysis indicates that Malaysian respondents identified Stimulation, Conformity and Tradition as important personal value for leaders. The first value (Stimulation) is defined by the motivational goals of excitement, novelty, and challenge, part of the Openness to Change dimension, is highly relevant for leadership because it underpins behaviours that foster adaptability and innovation in dynamic organisational environments (Schwartz, 2012). Leaders who prioritise Stimulation are inclined to embrace uncertainty, seek creative solutions, and encourage experimentation, thereby cultivating a culture of continuous improvement and responsiveness to change. This orientation aligns closely with entrepreneurial leadership paradigm, which advocates challenging the status quo and inspiring followers toward bold, future-oriented goals (Črešnar and Nedelko, 2020). Moreover, stimulation-driven leadership enhances organisational agility by promoting proactive engagement with emerging opportunities and technological advancements, while also contributing to employee development through stimulating work contexts that support learning and growth (Van Doorn and Raz, 2023).

Conformity and Tradition are part of the Conservation dimension emphasising stability, social order, and respect for established norms. For leaders, these values are significant because they underpin behaviours that maintain organisational cohesion and legitimacy. Conformity reflects restraint of actions that might disrupt group harmony, fostering ethical compliance and predictability in decision-making (Ng, 2011). Leaders who prioritise conformity often ensure adherence to rules and standards, which is critical in highly regulated or safety-sensitive contexts. Similarly, Tradition involves respect and commitment to cultural customs and organisational heritage, reinforcing continuity and trust among stakeholders (Schwartz, 1992; Schwartz and Bardi, 2001). These values contribute to stability and identity preservation, which can strengthen morale and stakeholder confidence. However, their emphasis on maintaining the status quo may conflict

with innovation-oriented leadership, requiring a balance between conservation and openness to change (Fischer and Schwartz, 2011)

However, the UK sample exhibited a narrower value orientation, placing relatively equal emphasis on Achievement and Benevolence. These values span two higher-order dimensions within Schwartz's framework; Self-Enhancement (Achievement), and Self-Transcendence (Benevolence). Achievement and Benevolence represent contrasting motivational orientations in Schwartz's value theory, yet both hold relevance for leadership effectiveness. Achievement reflects a focus on demonstrating competence and attaining success, which aligns with leadership behaviours that emphasise goal attainment, performance standards, and innovation (Sagiv, Schwartz, and Arieli, 2011). Leaders who prioritise achievement are often driven to challenge existing practices and pursue excellence, fostering a competitive and results-oriented organisational climate (Nezlek, 2024).

Conversely, Benevolence emphasises preserving and enhancing the welfare of close others, supporting leadership behaviours grounded in trust, ethical responsibility, and relational transparency (Prime et al., 2021). Benevolent leaders tend to prioritise team cohesion and fairness, which strengthens follower commitment and psychological safety, critical for authentic leadership style. Together, these values illustrate the dual imperative for leaders to balance ambition with care, ensuring organisational success while maintaining interpersonal integrity (Schwartz and Bardi, 2001).

This pattern reflects a leadership value system that integrates performance aspirations with a strong commitment to social order, cultural continuity, and stability. Such findings align with prior research on collectivist and high power-distance societies, where leadership expectations often incorporate respect for hierarchical norms and maintenance of harmony (Kennedy and Mansor, 2000; Pearson and Entekin, 2001).

The key differences between UK and Malaysian respondents lie in the salience of tradition, conformity, and stimulation, which were prioritised by Malaysian participants but not by their UK counterparts. These differences can be interpreted

through cultural value orientations: UK respondents' emphasis on achievement aligns with individualistic and performance-driven norms, whereas Malaysian respondents' inclusion of Conservation values underscores the importance of preserving established practices and ensuring predictability in organisational contexts (Schwartz and Bardi, 2001; Knafo et al., 2011). The benevolence value depicted by the UK responses adds another layer to how leaders regulate socially to others and affect them.

Overall, these findings reinforce the applicability of Schwartz's value theory in explaining leadership value orientations across cultural contexts. They also highlight the implications for leadership development, particularly the need for culturally adaptive frameworks that recognise the coexistence of achievement-driven individualism in Western contexts and tradition-oriented collectivism in Asian settings.

The impact of leaders on followers was reported at 56% in the UK and 57% in Malaysia. These findings partially align with the work of Jensen and Luthans (2006), who identified a significant influence of authentic entrepreneurial leaders on their followers. The adoption of technology among millennial leaders is evident in both national contexts, with a notably higher average in Malaysia (74%) compared to the UK (63%). This supports existing literature which highlights millennials' perception of technology as an essential tool (Folarin, 2021; Holt, Marques and Way, 2012; Hershatter and Epstein, 2010).

Evaluation of Hypotheses

H1: Millennial leaders' personal values will positively affect their authentic leadership style in both UK and Malaysian samples.

H1 hypothesis is accepted. UK sample responses indicated a moderate and positive correlation between personal values and authentic leadership (0.588), slightly higher than the outcome seen from the Malaysian sample with a figure of 0.451.

From a UK perspective, the personal values of Achievement and Benevolence are associated with leadership behaviours such as admitting mistakes, expressing emotions, making decisions grounded in core values with follower support, recognising when to revise positions on critical issues, and appreciating the impact of their actions on others. These behaviours correspond to three dimensions of authentic leadership, Relational Transparency, Internalised Moral Perspective, and Self-Awareness, while Balanced Processing is not represented. Internalised Moral Perspective reflects the leader's values, morality, and beliefs (Cervo et al., 2016). In contrast, the Malaysian context places emphasis on the personal values of Stimulation, Tradition, and Conformity, which are linked to analysing data and considering diverse viewpoints prior to decision-making, seeking feedback to enhance interactions, reassessing positions on significant matters, and demonstrating awareness of the consequences of their actions.

H2: Millennial leaders' personal values will positively affect their entrepreneurial leadership style in both UK and Malaysian samples.

H2 hypothesis is accepted. UK sample indicate a moderate but positive correlation between personal values and entrepreneurial leadership with a correlation value of 0.653 higher than the Malaysian respondents' value of 0.576. Taking both responses into consideration, a positive relationship can be determined between leaders' personal values and their entrepreneurial style in these two cultures.

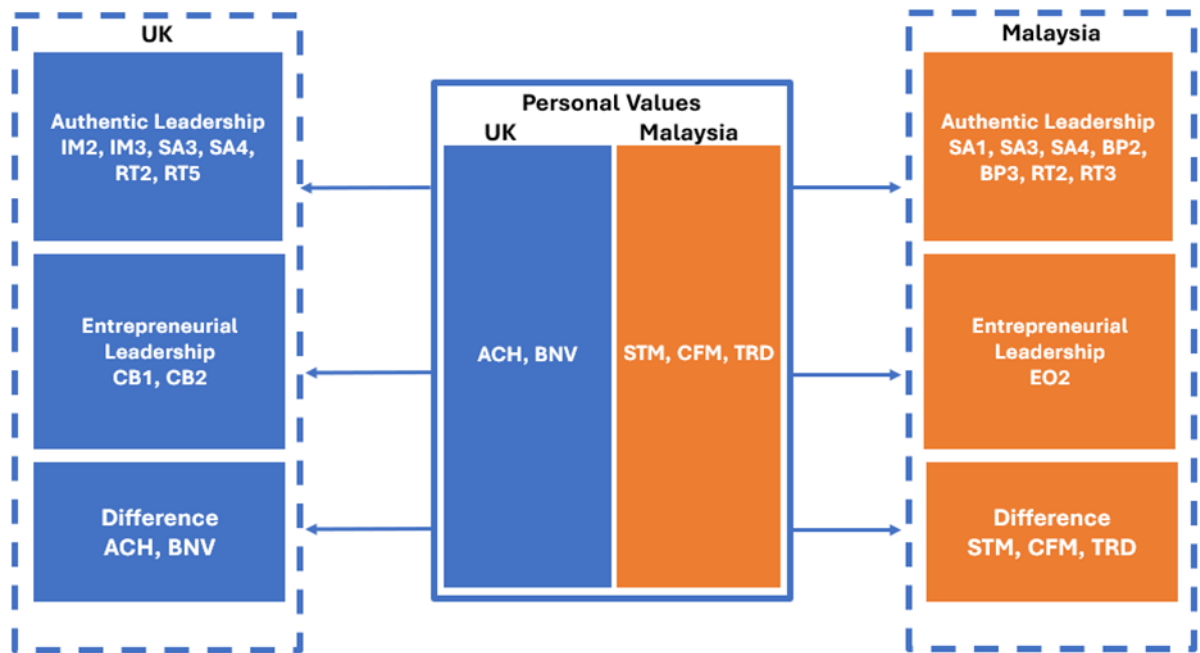
The UK sample indicates that personal values are associated with entrepreneurial behaviours such as challenging and encouraging followers to adopt more innovative approaches, alongside prompting them to question existing practices. While these actions reflect creativity and strategic direction, the element of passion, considered a central component of entrepreneurial leadership (Thornberry, 2006), was not evident in this sample. Passion is not solely a defining characteristic of entrepreneurial leaders; rather, it encompasses the capacity to inspire followers to cultivate their own entrepreneurial mindset (Cardon et al., 2009). In contrast, the Malaysian sample reveals a connection between personal values and only one entrepreneurial leadership behaviour: the regular introduction

of ideas for new products or services that the organisation could market. The dimension of personal creativity appears limited, as other relevant entrepreneurial behaviours were absent. Renko et al. (2008) emphasise critical attributes of entrepreneurial leaders, including risk-taking, opportunity recognition, and motivating followers; however, these roles did not emerge as significant within this context.

H3: Millennial leaders' personal value differences will positively affect the UK and Malaysian samples.

Personal value factors that exhibited significant loadings for UK leaders and followers were Achievement and Benevolence, whereas Malaysian leaders and followers emphasised Stimulation, Conformity, and Tradition, thereby supporting hypothesis H3. These findings partially align with the conclusions of Sagiv, Schwartz, and Arieli (2011), who argue that Achievement is particularly salient within Western populations, while Conformity is a prominent value in Asian contexts. Interestingly, the Power value, typically associated with collectivist and autocratic cultures such as Malaysia, did not exert any influence in this study. Furthermore, Sagiv, Schwartz, and Arieli (2011) contend that Benevolence is more prevalent in Confucian cultures and South Asia than in Western societies, a pattern that contrasts with the present findings.

Figure 30. Revised PVL Model



Source: Developed by the researcher

Note: Personal Values: ACH=Achievement, BNV=Benevolence, STM=Stimulation, CFM=Conformity, TRD=Tradition.

Authentic Leadership: IM=Internalised Moral Perspective, SA=Self-Awareness, BP=Balanced Processing, RT=Relational Transparency.

Entrepreneurial Leadership: CB=Creativity Support Behaviour, EO=Entrepreneurial Orientation.

The revised framework (Figure 30) presents the Personal Values Leadership (PVL) model that integrates the dominant personal values identified within each country, alongside the corresponding attributes of authentic and entrepreneurial leadership. This model is underpinned by the observed cross-cultural differences in personal values, which shapes the leadership behaviours and orientations evident in the UK and Malaysian contexts.

4.8 Addressing Research Questions

RQ1: Is there a direct relationship between personal values and authentic leadership of millennial leaders in the UK?

Findings show that there is a moderate relationship between personal values and authentic leadership of millennial leaders in the UK sample. Personal values derived from Schwartz (1992) are aligned with Walumbwa et al. (2008) authentic leadership model providing validity of the use of the instrument in the UK. Personal values evident in the UK findings are part of Schwartz's (2016) circular continuum that includes Self-Enhancement (Achievement) and Self-Transcendence (Benevolence).

This reinforces previous studies that evidenced a direct relationship between personal values and leadership in general (Sosik, 2005; Dean, 2008; Gao, 2015; Črešnar and Nedelko, 2020). Authentic leadership components include aspects of Relational Transparency, Self-Awareness and Internalised Moral Perspective, responses tabulated and analysed based on UK sample responses.

Millennial leaders in UK demonstrate Relational Transparency by openly acknowledging their mistakes and expressing emotions that align with their genuine feelings. They exhibit an Internalised Moral Perspective by making decisions grounded in their core values and encouraging their team members to adopt positions that reflect these principles. Furthermore, they display a high degree of Self-Awareness, as evidenced by their ability to reassess their stances on critical issues and their sensitivity to the impact of their actions on others.

RQ2: Is there a direct relationship between personal values and entrepreneurial leadership of millennial leaders in the UK?

The findings of the analysis reveal a statistically significant positive relationship between personal values and entrepreneurial leadership, as reported by both leaders and their followers. Responses from the UK specifically highlight that entrepreneurial leadership is manifested through Creativity Supportive Behaviour, such as encouraging employees to challenge existing practices and adopt more

innovative approaches. This aligns with prior research that has established a strong connection between entrepreneurial leadership and innovativeness (Pinela, Guevara and Armijos, 2022; Li, Makhdoom and Asim, 2020; Newman et al., 2018; Bagheri and Akbari, 2018).

RQ3: Is there a direct relationship between personal values and authentic leadership of millennial leaders in Malaysia?

The results indicate a moderate positive relationship between personal values and authentic leadership within the Malaysian context, mirroring similar findings from the United Kingdom, albeit with a slightly stronger correlation observed in the UK. The personal values most closely associated with authentic leadership in Malaysia include Stimulation, Conformity, and Tradition. Specifically, Malaysian millennial leaders demonstrate a preference for excitement, novelty, and challenge (reflecting Openness to Change through Stimulation), while also exhibiting a tendency to adhere to social norms and cultural or religious traditions (reflecting Conservation through Conformity and Tradition). The corresponding dimensions of authentic leadership identified in this context are Relational Transparency, Balanced Processing, and Self-Awareness. These findings are consistent with prior research, which highlights self-awareness as a particularly influential component of authentic leadership among Malaysian leaders (Opatokun, Hasim, and Hassan, 2013), aligning with earlier studies by Walumbwa et al. (2008) and Gardner et al. (2005). Malaysian millennial leaders are characterised by their willingness to acknowledge mistakes, foster open communication, critically evaluate information before decision-making, actively listen to diverse perspectives, seek feedback to enhance interpersonal interactions, reassess their positions on significant issues when necessary, and demonstrate empathy regarding the impact of their actions on others.

RQ4: Is there a direct relationship between personal values and entrepreneurial leadership of millennial leaders in Malaysia?

The analysis reveals a statistically significant positive relationship between personal values and entrepreneurial leadership, as reported by both leaders and

followers. In the Malaysian context, however, entrepreneurial leadership was primarily reflected in the tendency of leaders and followers to generate ideas for entirely new products or services. Other dimensions typically associated with entrepreneurial leadership such as encouraging employees to challenge existing business practices or fostering creativity-supportive behaviours were notably absent from the responses. This limited engagement with the broader spectrum of Entrepreneurial Orientation suggests a narrower interpretation of entrepreneurial leadership among Malaysian respondents. These findings partially align with the study by Cai et al. (2019), which identified a direct relationship between entrepreneurial leadership and workplace creativity, though the current results indicate a more constrained application of Creativity Supportive Behaviour dimension in practice.

RQ5: Are there differences in personal values of authentic entrepreneurial leaders of Generation Y between the two cultures?

The analysis identified five personal values that differed between the UK and Malaysian samples. Specifically, Achievement and Benevolence were more prominent among UK respondents, while Stimulation, Conformity, and Tradition were more salient among Malaysian respondents. These findings partially align with Schwartz and Bardi (2001), who found that Benevolence was consistently rated as highly important across cultures, while Stimulation was generally less prioritised, and Achievement and Conformity occupied a mid-level position in the value hierarchy. Furthermore, Witte, Stanciu, and Boehnke (2020) emphasised the role of socioecological factors in shaping the prioritisation of values such as Stimulation and Tradition across different cultural contexts. Notably, the value of Power was not identified in the Malaysian sample, which contrasts with previous literature linking Power values to collectivist societies such as Malaysia (Sweetman, 2012; Sumaco, Imrie, and Hussain, 2014). This discrepancy challenges the assumption that hierarchical cultures inherently prioritise power values, as suggested by Hofstede (2017) and others. Harun, Abdul Rahim, and Mohamad Salleh (2020) further argue that such hierarchical dynamics can lead to employee dissatisfaction due to perceived opacity in decision-making processes.

Additionally, Schewe et al. (2013) contend that millennials tend to align their value systems with prevailing national cultural norms, which may explain the diminished emphasis on Power values in the Malaysian millennial cohort. This observation supports Cavagnaro, Staffieri, and Postma's (2018) assertion that millennial values are not universally consistent across cultural contexts.

4.9 Conclusion

Study I comprised of 136 millennial leaders supported by Study II with a total of 213 followers of millennial leaders from both the selected cultures.

Study I descriptive statistics listed 52% of UK female leaders in contrast to 54% of Malaysian male leaders whereas Study II recorded 52% female followers in the UK against 58% female followers in Malaysia as the composition of the respondents' gender. UK leaders registered a higher percentage of General Manager as the predominate position held (23%) with college or university qualifications (56%). In contrast Malaysian leaders held roles of owner/partner and General Manager as the highest percentage with a split of 25% each. The Malaysian leaders achieved college or university qualifications (70%) as the highest values. UK followers exhibited highest percentages of 57% and 72% for college or university qualifications in the UK and Malaysian samples respectively.

Reliability of measurement scales of all constructs used were confirmed with the use of Cronbach's alpha. This was followed by tests of normality with the help of Shapiro-Wilk and the findings confirmed that the variables were normally distributed prompting the use of parametric tests.

Independent t-test results indicate that there are statistically significant differences based on Levene's test between variables for both countries. These results are consistent with the findings of Pearson's correlation of personal values with authentic leadership and personal values with entrepreneurial leadership. The correlation matrix corroborates the findings with relevant linear relationships that indicate any changes in personal value variable are related to changes in variable authentic leadership and entrepreneurial leadership following guidance provided by Cohen.

The results of the Exploratory Factor Analysis (EFA), conducted using maximum likelihood estimation with oblimin rotation, identified six core personal values among Malaysian respondents: Power, Achievement, Stimulation, Tradition, Conformity, and Security. In addition to these values, several behavioural indicators emerged, reflecting leadership characteristics. These included the ability to admit mistakes, encourage open communication, analyse relevant data before decision-making, actively listen to diverse perspectives, seek feedback to enhance interpersonal interactions, reassess leadership positions when necessary, and demonstrate awareness of the impact of actions on others. These behaviours align with the authentic leadership dimensions of Relational Transparency, Balanced Processing, and Self-Awareness, and reflect aspects of entrepreneurial leadership, particularly the generation of novel product or service ideas.

In contrast, the UK sample highlighted Achievement and Benevolence as the dominant personal values. Leadership behaviours identified in this context included admitting mistakes, encouraging open dialogue, communicating difficult truths, expressing emotions congruent with internal feelings, making decisions based on core values, and encouraging staff to align with these values. These behaviours correspond to authentic leadership dimensions, while entrepreneurial leadership was characterised by encouraging innovation and challenging existing business practices. These findings underscore cultural distinctions in value orientation and leadership expression between the two national contexts.

Confirmatory Factor Analysis (CFA) was conducted to validate the factor structure identified through Exploratory Factor Analysis (EFA). The CFA results indicated statistically significant estimates, supporting the overall model fit. However, modifications were necessary to improve factor loadings. In the UK sample, three items related to authentic leadership, encourages everyone to speak their mind, tells staff the hard truth, and listens carefully to different points of view before coming to conclusions, were removed due to inadequate loadings. Similarly, in the Malaysian sample, the personal values of Power, Achievement, and Security were excluded for the same reason. The analysis supported a second-order factor

model, consistent with the findings of Walumbwa et al. (2008), reinforcing the multidimensional structure of authentic leadership.

Followers from the Malaysian sample indicated a slightly higher percentage of 57% compared to 56% of UK followers with regards to the positive impact of their relevant leaders. UK leaders and followers had an approximate figure of 60% that agreed with the use of technology compared to approximately 70% for Malaysian leaders and followers.

Three of the hypotheses were discussed and accepted. H1 was accepted as there was a positive effect of personal values on authentic leadership in both cultures. H2 was accepted indicating a positive effect of personal values on entrepreneurial leadership in both cultures. H3 was accepted as the differences in personal values were clearly demonstrated influencing impact to the two groups.

The final section involved the attempt at addressing the research questions. At the beginning of the study five key research questions were identified.

RQ1: Is there a direct relationship between personal values and authentic leadership of millennial leaders in the UK?

RQ2: Is there a direct relationship between personal values and entrepreneurial leadership of millennial leaders in the UK?

RQ3: Is there a direct relationship between personal values and authentic leadership of millennial leaders in Malaysia?

RQ4: Is there a direct relationship between personal values and entrepreneurial leadership of millennial leaders in Malaysia?

RQ5: Are there differences in personal values of authentic entrepreneurial leaders of Generation Y between the two cultures?

Findings from the study supported all five research questions; a direct relationship was established between personal values and authentic leadership in the UK (RQ1); a positive outcome was established between personal values and entrepreneurial leadership in the UK (RQ2); a moderate relationship was found

between personal values and authentic leadership in Malaysia (RQ3); a positive but limited relationship has been established between personal values and entrepreneurial leadership in Malaysia (RQ4); five personal values were found to be different between the two groups (RQ5).

Chapter 5: Discussion

This study examined the relationship between personal values and authentic entrepreneurial leadership of UK and Malaysian millennial leaders. The independent variable, personal values construct has been conceptualised to have ten different types of values namely power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security represented by four dimensions: self-enhancement, openness to change, self-transcendence, and conservation (Schwartz, 1992). The dependent variable authentic leadership construct has four different types of behaviour: self-awareness, balanced processing, internalised moral perspective, and relational transparency (Walumbwa et al., 2008). The dependent variable entrepreneurial leadership construct has eight items: “often comes up with radical improvement ideas for the products/services we are selling”, “often come up with ideas of completely new products/services that we could sell”, “takes risks”, “has creative solutions to problems”, “demonstrates passion for his/her work”, “has a vision of the future of our business”, “challenge and push staff to act in a more innovative way” and “want staff to challenge the current ways they do business”.

The analyses performed in the findings section indicate important outcomes for theoretical contributions. The practical contributions are discussed in the next section. The outcomes equally provide opportunities for future research to address the shortfalls of the current study.

Study I provided a perspective from the millennial leaders of UK and Malaysia SMEs with a combined total of 136 reflecting higher propositions of Malaysian males compared to UK respondents representing England and West Malaysia.

Participants reported clear association between their personal values and authentic entrepreneurial leadership.

Study II collected responses from followers of millennial leaders of UK and Malaysia SMEs with a total of 213 comprising of a higher percentage of female than male respondents from both countries with majority from England and West Malaysia. The outcomes equally had valid association between their leaders' personal values and authentic entrepreneurial leadership supporting Study I.

The study's research objectives are reviewed to align with the results discussed earlier.

RO1: To critically evaluate whether there is a direct relationship between personal values and authentic leadership among millennial leaders in the UK and Malaysia.

This objective was met based on the findings of both the UK and Malaysian participants' feedback and analyses. This was expected given that evidence from literature suggests a valid relationship between the two variables. The link between personal values and authentic leadership was stronger in comparison to the relationship between personal values and entrepreneurial leadership across both countries. The expectation here is that as the sample included leadership within SME environment there is a presumption that this link is equal or stronger than authentic leadership. However, the results were moderately in favour of entrepreneurial leadership. This finding suggests that millennial leaders are more attuned to associating personal values to authentic leadership compared to entrepreneurial leadership across the two countries. There is an opportunity here to perform further empirical tests with other leadership approaches involving millennial leaders.

RO2: To critically evaluate whether there is a direct relationship between personal values and entrepreneurial leadership among millennial leaders in the UK and Malaysia.

This research objective has been addressed; however, the extent to which entrepreneurial leadership dimensions were associated with personal values

appeared limited. In the UK sample, only two items corresponding to the Creativity Supporting Behaviour component of the ENTRELEAD model (Renko et al., 2015) were identified. In contrast, the Malaysian sample revealed evidence of only one Entrepreneurial Orientation component. This outcome was somewhat unexpected, particularly given that the participants were drawn from small and medium-sized enterprises (SMEs), which are typically characterised by a degree of entrepreneurial activity. Renko et al. (2015) acknowledged that the applicability of the ENTRELEAD model may be influenced by environmental, organisational, and follower-specific contingencies, suggesting that cultural context could moderate how the model's dimensions are expressed or perceived. Supporting this view, Gupta, MacMillan, and Surie (2004) found considerable cross-national variation in the valuation of entrepreneurial leadership traits across 62 societies. Furthermore, Ravet-Brown, Furtner, and Kallmuenzer (2024) argue that the limited empirical evidence for the model's divergent validity raises concerns about its capacity to fully capture culturally nuanced leadership behaviours. These findings collectively indicate that while the ENTRELEAD model offers a valuable framework, its universal applicability may be constrained by cultural and contextual factors.

RO3: To critically analyse any differences in the personal values associated with authentic and entrepreneurial leadership among Generation Y in the UK and Malaysia.

This research objective has been achieved, as the findings reveal five distinct differences in personal values between the two groups of millennial leaders. Specifically, Achievement and Benevolence emerged prominently among UK respondents, while Stimulation, Conformity, and Tradition were more salient among Malaysian participants. These results were somewhat unexpected, particularly in light of the well-documented cultural distinctions between the two national contexts. Previous studies have characterised the Malaysian work environment as favouring autocratic leadership styles (Ansari, Ahmad, and Aafaqi, 2004), in contrast to the more participative leadership approaches prevalent in the UK (Ogbonna and Harris, 2000).

From a cultural perspective, the UK and Malaysia differ significantly. According to Hofstede Insights (2017), both countries exhibit relatively low Uncertainty Avoidance scores of 35 for the UK and 36 for Malaysia, indicating a shared tolerance for ambiguity and flexibility. However, a stark contrast is observed in the Power Distance Index (PDI), with the UK scoring 35 and Malaysia scoring 100. This suggests a more egalitarian organisational culture in the UK, where employees are encouraged to voice their opinions, whereas Malaysian organisations tend to exhibit hierarchical structures with centralised authority.

Interestingly, the current study presents findings that diverge from these cultural expectations. Malaysian millennial leaders and followers did not prioritise Power as a core value, instead highlighting Stimulation (linked to Openness to Change), Conformity, and Tradition (associated with Conservation). Conversely, UK respondents emphasised Achievement (Self-Enhancement) and Benevolence (Self-Transcendence). These findings align with Schwartz's (2007) assertion that younger individuals are more likely to prioritise values related to Self-Enhancement and Openness to Change. Although Benevolence and Achievement are theoretically in conflict (Ros, Schwartz, and Surkiss, 1999), Sverdlik (2012) suggests that individuals may prioritise one over the other depending on contextual factors.

These results imply that millennial leaders across the UK and Malaysia exhibit differing value orientations that are not strictly determined by national culture, particularly in the Malaysian context. This partially supports Egri and Ralston's (2004) proposition that generational cohorts can be associated with four overarching value dimensions: Openness to Change (e.g., Self-Direction, Stimulation), Conservation (e.g., Conformity, Security, Tradition), Self-Enhancement (e.g., Achievement, Hedonism, Power), and Self-Transcendence (e.g., Universalism, Benevolence).

Furthermore, the findings challenge prevailing stereotypes of millennials as self-interested, entitled, or lacking work ethic (Twenge et al., 2008; Stein, 2013; Ramayah et al., 2017). Contrary to these generalisations, the millennial leaders in

this study demonstrated value orientations that reflect responsibility, openness, and a balance between personal ambition and concern for others. These results also contradict claims that millennials are primarily driven by entitlement and expectations of rapid advancement without corresponding performance (Rani and Samuel, 2016; Hg, Schweitzer and Lyons, 2010).

Nonetheless, caution is warranted in generalising these findings to all millennial leaders in the UK and Malaysia due to the limited sample size. Further research with larger and more diverse samples is necessary to validate and expand upon these insights.

5.1 Limitations

A limited sample size was undertaken for the current study. Data was collected from a sample size of N=210 (UK) followed by N=139 (Malaysia). Furthermore, the focus was on millennial leaders and there were no considerations provided to the other generations. The study focused on SMEs in both countries with no specific industry sectors selected. Some sectors with high stress levels such as healthcare, military and public safety may influence the outcome compared to private commercial sectors.

Participants were selected from two specific countries rather than expanding to include other cultures. The study adopted a quantitative data approach with a positivism stance utilising questionnaire format. Moreover, the current study was carried out during the period of COVID-19 where respondents were reluctant to consent to online participation due to internet fatigue or opting for personal interviews. It is considered interesting to collect and analyse a comparative data set post COVID-19.

Self-selection bias is another aspect that could be a limiting factor. Harber, Zimbardo and Boyd (2003) refer to self-selection bias as respondents who have extreme time urgency that effects their time utilised to complete the questionnaire. In addition, under-coverage may contribute as respondents with no internet access maybe excluded from the survey (Bethlehem, 2010). According to Statista (2023) age distribution of internet users in Malaysia displayed 46% in the

20 to 30 years group compared to 21.2% in the 30 to 40 years, 12.3% in the 40 to 50 years and only 7.4% in the 50 to 60 years. This could have implications for leaders and followers' sample sizes in the study. However, the UK internet access by age showed a 100% outcome across all relevant age groups (Statista, 2023a).

Chapter 6: Conclusion

Studies have shown that leadership varies from one country to another based on their cultural differences. This study represents an outcome that denotes a positive relationship between authentic entrepreneurial millennial leaders and personal values across two diverse countries.

This study set out to examine the influence of personal values on authentic and entrepreneurial leadership among millennial leaders in the United Kingdom and Malaysia. In doing so, it addressed several notable gaps in the existing literature. First, much of the prior research has predominantly focused on millennial students, whose perspectives may reflect aspirational intentions rather than the lived experiences of individuals actively engaged in leadership roles or those reporting to millennial leaders. This study contributes by focusing on practicing millennial leaders and their followers, offering a more grounded understanding of leadership behaviours in real-world organisational contexts.

Second, comparative analyses of personal values and leadership styles between UK and Malaysian millennial leaders have been largely absent. Given the stark cultural contrasts between the UK, an individualistic society with a low power distance and Malaysia, a collectivist society with a high power distance (Hofstede Insights, 2017; Harun, Abdul Rahim, and Salleh, 2020; Nordin et al., 2022). This study provides valuable insights into how these cultural dimensions shape leadership values and practices. Importantly, Singh and Xiuxi (2023) caution against homogenising Asian countries, noting that Malaysia's cultural context differs significantly from those of North Asian nations such as Japan, China, and South Korea.

Third, the literature lacks a clearly defined leadership model tailored to the millennial generation. While transformational leadership has frequently been associated with millennials (Holt, Marques, and Way, 2012; Onorato, Walsh, and Lei, 2018), this association is largely drawn from Western-centric studies. In Malaysia, a shift has been observed from transformational to ethical and servant leadership models (Hoxa, 2019; Ab Rahman and Jantan, 2020; Hassan et al., 2022). Although interest in authentic leadership is growing, scholarly consensus remains limited, partly due to its foundations in positive psychology (Helmuth, Cole, and Vendette, 2023).

Fourth, there is a paucity of research focusing specifically on millennials in entrepreneurial leadership roles. While existing studies have explored millennial entrepreneurship, they often emphasize traits such as agility and an enterprising mindset (Genoveva and Tanardi, 2020; Hindrawati, Dhewanto, and Dellyana, 2023), rather than examining how millennials lead within entrepreneurial contexts (Liu et al., 2019).

Finally, cross-national comparisons of millennial personal values remain underexplored. Previous studies have primarily compared Malaysian managers with counterparts in the U.S. and Australia (Westwood and Everett, 1995), often using outdated instruments such as England's (1967) Personal Values Questionnaire or Super's (1973) Work Values Inventory (Ismail et al., 2016). This study addresses this gap by applying Schwartz's (1992, 2012) theory of basic human values to explore generational and cultural differences in leadership values.

In sum, this research contributes to the growing body of knowledge on millennial leadership by offering a culturally comparative perspective and highlighting the nuanced interplay between personal values, leadership styles, and generational identity. However, the findings should be interpreted with caution due to the limited sample size, and future research is encouraged to build on these insights with broader and more diverse populations.

The findings of this study reveal a moderate relationship between millennials' personal values and authentic leadership across both cultures. This enhances understanding of how personal values influence authentic leadership among millennials in two distinct national contexts, thereby fulfilling the first research objective: evaluating the direct link between personal values and authentic millennial leaders in the UK and Malaysia. These results suggest that authentic leadership may represent a viable leadership approach for millennials. The sample comprised millennial leaders and followers within SMEs in both countries.

A similar moderate relationship was observed between millennials' personal values and entrepreneurial leadership in the UK and Malaysia, although the leadership dimensions examined were limited. This contrasts with Jensen and Luthans (2006), who found that authentic entrepreneurial leaders exerted a significant impact on employees. These findings address the second research objective: assessing the direct relationship between personal values and entrepreneurial millennial leaders in both nations. Overall, millennials' perceptions appear more favourable towards authentic leadership than entrepreneurial leadership.

The third research objective is achieved through identifying five key differences in personal values between UK and Malaysian millennial leaders, which are discussed in the following paragraph and supported by existing literature. Benevolence emerged in the UK sample, partially aligning with Schwartz (2007), but was absent in Malaysian findings (Ros, Schwartz and Surkiss, 1999). The UK sample prioritised benevolence and achievement, whereas Malaysian respondents emphasised stimulation, conformity, and tradition. Benevolence, part of Schwartz's Self-transcendence dimension, reflects concern for those in close contact (Sagiv and Schwartz, 2020) and has been positively associated with altruistic behaviour in UK studies, corroborating these results. Achievement, within the Self-enhancement dimension, denotes striving for success and competence according to social standards (Schwartz, 2012). Cross-cultural research (Schwartz, 2011) indicates that achievement is universally recognised but valued more highly in individualistic societies than in collectivist ones.

Stimulation, an Openness to Change value, signifies a desire for excitement and challenge (Schwartz, 2022), and its prioritisation is influenced by socioecological factors such as economic development and urbanisation (Witte, Stanciu, and Boehnke, 2020). Conformity and tradition, both Conservation values, involve adherence to social norms and religious practices (Sagiv and Schwartz, 2020), consistent with Malaysian findings. Interestingly, the absence of power in Malaysian results contradicts prior studies (Ansari et al., 2004; Ogbonna and Harris, 2000; Ahmed et al., 2008; Rahman, 2019) linking the country to autocratic management styles, as well as research associating power distance with Asian cultures (Takeuchi, Wang and Farh, 2020). This suggests that personal values may not be entirely shaped by national culture, challenging earlier literature (Muduli, 2011; Susaeta et al., 2013). These findings collectively address differences in personal values relevant to authentic and entrepreneurial millennial leaders across both nations.

This study is grounded in three key theoretical perspectives: personal values (Sagiv and Schwartz, 2022), authentic leadership (Walumbwa et al., 2015), and entrepreneurial leadership (Renko et al., 2008). Personal values offer a robust foundation for understanding leadership behaviours and decision-making processes, as well as for identifying the value priorities that millennials consider significant. Authentic leadership emphasises trust-building and relational development, while entrepreneurial leadership complements this by fostering initiative-taking and innovation.

Applying the PVL model, the study examines how dominant personal values within each national context shape authentic and entrepreneurial leadership characteristic. In the UK, authentic leadership is reflected in behaviours such as acknowledging mistakes, expressing emotions congruent with genuine feelings, making decisions aligned with core values, encouraging staff to support these values, reassessing positions on critical issues when necessary, and demonstrating awareness of the impact of actions on others. Entrepreneurial leadership, by contrast, manifests in challenging employees to adopt innovative

practices and question existing work processes. The underlying personal values influencing these behaviours in the UK are achievement and benevolence.

In Malaysia, the key influencing values are stimulation, conformity, and tradition. These values correspond to authentic leadership behaviours such as analysing relevant data prior to decision-making, listening attentively to diverse perspectives, seeking feedback to enhance interpersonal interactions, reassessing positions when appropriate, acknowledging mistakes, and fostering open dialogue. Entrepreneurial leadership in this context is characterised by generating ideas for entirely new products or services.

The results indicate that UK millennial leaders demonstrate an authentic self, fostering trust through the transparent expression of thoughts and emotions while minimising inappropriate emotional displays (Kernis, 2003). These leaders exhibit behaviours such as acknowledging mistakes, expressing emotions congruent with their true feelings, making decisions grounded in core values endorsed by followers, reassessing positions on critical issues when necessary, recognising the impact of their actions on others, and encouraging followers to adopt more innovative approaches. These behaviours are underpinned by personal values associated with the pursuit of individual success and the preservation of the welfare of those in close contact (Schwartz, 2012). The findings suggest that Malaysian millennial leaders develop self-awareness through interactions with others and demonstrate an understanding of the impact of their behaviour on colleagues (Kernis, 2003). These leaders exhibit practices such as analysing relevant data and soliciting feedback prior to decision-making, actively seeking to improve interpersonal interactions. They reassess their positions on critical issues, when necessary, acknowledge mistakes, and encourage collaborative discussions. Additionally, they frequently generate ideas for new products or services that could be introduced to the market. These behaviours are underpinned by personal values associated with overcoming life challenges, minimising harm to others, and maintaining cultural and religious norms (Schwartz, 2001).

Contributions of the Study

This research makes several significant contributions. First, it establishes clear linkages between personal values, authentic leadership, and entrepreneurial leadership within the context of millennial leaders, based on a comparative analysis of the UK and Malaysia. The findings demonstrate the influence of personal values on authentic leadership, followed by their impact on entrepreneurial leadership, highlighting the prevalence of these relationships among millennials.

Second, the study provides evidence that authentic leadership may represent a viable leadership approach for millennials, as supported by the observed behaviours and value orientations. Third, unlike prior research that often relied on millennial student samples, this study focuses on millennial leaders within SMEs in both countries, thereby enhancing the practical relevance of its findings. To the best of our knowledge, this is among the first studies to examine the influence of personal values on authentic and entrepreneurial leadership among millennial leaders across these two cultural contexts. The PVL model employed illustrates the relationships between these constructs and offers potential for extension to other positive leadership theories.

Fourth, the absence of the power value in the Malaysian sample challenges previous studies that associate the country with an autocratic, collectivist national culture, where power and authority are typically prioritised alongside hierarchical organisational structures. This finding may reflect generational differences, as suggested by Carmichael (2016) and Johnson (2015), who argue that millennials possess a complex and sometimes conflicting set of values compared to older cohorts. However, further research is required to substantiate this interpretation.

Fifth, the study offers implications for leadership education. Higher education institutions could design curricula that incorporate leadership approaches and styles aligned with millennials' value orientations. Personal values associated with authentic leadership could be integrated into teaching strategies, and the use of personal values questionnaires could help evaluate leadership quality, creating a

more targeted learning experience. Additionally, academics may explore the integration of other leadership theories with culture as a mediating factor.

Finally, the study provides practical insights for organisations and practitioners. Understanding millennials' value-driven leadership preferences can inform recruitment, selection, and development processes. Interview and appraisal systems could emphasise values such as benevolence, achievement, and self-direction, aligning individual and organisational priorities. Such practices support the notion that employees' personal values can contribute to organisational effectiveness and competitive advantage (Pfeffer, 2002).

6.1 Reflection

Undertaking this research has been both an academically enriching and personally transformative experience. At the outset, my understanding of leadership theories and statistical methodologies was primarily conceptual. However, as the study progressed, I encountered a steep learning curve, particularly in mastering advanced statistical techniques and interpreting complex data outputs. Overcoming these challenges required persistence, adaptability, and a willingness to seek guidance from experts and peers, as acknowledged earlier in this thesis.

One of the most profound insights gained during this process was the sheer breadth and depth of leadership literature. This study represents only a narrow lens into a vast and continually evolving field. Engaging with existing research and identifying gaps not only deepened my theoretical understanding but also ignited a strong desire to continue exploring this domain. I now recognise that research is not a finite endeavour but an ongoing pursuit of knowledge and refinement.

The constraints imposed by the COVID-19 pandemic further shaped my perspective as a researcher. Limited access to respondents and logistical challenges underscored the importance of flexibility and contingency planning in research design. These experiences reinforced the value of resilience and creative problem-solving in navigating unforeseen obstacles.

Looking forward, I am motivated to build upon this foundation by incorporating additional methodologies in future studies. A mixed-methods approach, integrating qualitative techniques such as interviews and thematic analysis alongside quantitative measures, would yield richer insights and a more holistic understanding of leadership phenomena. Furthermore, with enhanced statistical proficiency, I aim to employ advanced analytical techniques, including multivariate regression and cluster analysis, to strengthen the robustness and generalisability of future findings.

Ultimately, this research journey has cultivated a passion for continuous learning and scholarly inquiry. It has reaffirmed my commitment to contributing meaningfully to the academic community and bridging the gap between theory and practice in leadership research.

6.2 Recommendations

This study provides an initial exploration of the relationship between personal values and authentic and entrepreneurial leadership among millennial leaders from a cross-cultural perspective, focusing on the UK and Malaysia. However, several limitations such as the relatively small sample size, the inclusion of only two countries, and potential self-selection bias should be acknowledged.

To address these limitations and advance the field, future research could consider the following recommendations:

1. Expand Sample Size and Scope

Increasing the sample size would enhance the generalisability of findings and strengthen statistical validity. Including additional generational cohorts, such as Generation Z and Generation X, would enable comparative analyses across generations, offering insights into whether generational differences influence leadership perceptions and value orientations. Generation Z, as an emerging workforce, presents a particularly valuable opportunity for intergenerational and cross-cultural research.

1. Broaden Leadership Frameworks

Future studies should examine millennial leaders in relation to other leadership styles, such as agile and digital leadership, which are highly relevant in today's dynamic business environment. Investigating positive leadership paradigms including servant, ethical, and transformational leadership would help determine whether similar value-based patterns emerge across diverse cultural contexts.

2. Integrate Well-being and Organisational Outcomes

Positive leadership, rooted in positive psychology, offers potential to enhance leader and follower well-being, which is closely linked to organisational performance. Research integrating leadership styles with well-being outcomes could inform strategies for creating healthier, more productive workplaces.

4. Adopt Mixed-Methods and Longitudinal Designs

Employing mixed methods approach combining qualitative techniques such as interviews and focus groups with quantitative surveys would provide richer insights and allow for data triangulation. Additionally, longitudinal designs could track changes in personal values and leadership behaviours over time, offering a dynamic perspective on evolving leadership trends.

5. Expand Geographical Coverage

Including neighbouring countries such as Singapore and Indonesia, which have lower Power Distance Index (PDI) scores compared to Malaysia (Hofstede Insights, 2022), could reveal whether variations in power distance influence leadership behaviours and value orientations. Such cross-cultural comparisons would deepen understanding of cultural nuances in leadership.

6. Employ Advanced Analytical Techniques

Future research could incorporate multivariate regression, cluster analysis, and trend modelling to examine complex relationships between culture, values, and leadership styles. These techniques would enhance the robustness and explanatory power of findings.

7. Explore Emerging Global Challenges

Investigating how millennials' leadership approaches adapt to global challenges such as digital transformation, sustainability, and workforce diversity would provide valuable insights into their resilience and adaptability across industries and cultural settings.

By pursuing these directions, scholars can enrich the academic discourse on leadership, inform organisational strategies for developing future leaders, and contribute to a more nuanced understanding of how generational and cultural factors shape leadership practices in a globalised context.

Appendix A: Search Scope of Articles

Full search of articles across academic journals relevant to the topic, based on the following inclusion criteria a) publication year from 2000 to 2022, b) option for Open Access c) Peer-reviewed Journals, d) published in English.

Criteria selected with the use of ABI/EBSCO/Proquest Global database and others.

First Phase

Search Keywords:

- Personal Values OR inner values OR human values,
- Authentic leadership OR entrepreneurial leadership OR authentic entrepreneurial leaders,
- UK and Malaysia OR UK OR Malaysia

Result: 19 articles identified.

Theme	Article	Author(s)/Journal	Comments
Authentic leadership	Authentic leadership: development of a new three pillar model	Beddoes-Jones and Swailes (2015)/Strategic HR Review	Development of new authentic leadership model derived from research with 140 business leaders, 54 senior military officers with 390 independent raters and 303 business leaders in the UK.

	View from the top – in women’s own words	Beal (2017)/Human resource management international digest	High-profile women leaders related to gender authentic leadership based on analysis of 6 famous women leaders’ autobiographies. They include women from USA, Australia and UK.
Entrepreneurial Leadership	Entrepreneurial Leadership and context in Chinese firms: a tale of two Chinese private enterprises	Wang, Tee and Ahmed (2016)/Asia Pacific business review	An exploratory case study based on two Chinese high-tech companies focusing on entrepreneurial leadership styles. Findings show an interaction of multilevel factors that forms a complex and dynamic context of leadership style.
	Unsettling the gender binary:	Patterson, Mavin and Turner (2012)/European	Feminist standpoint

	experiences of gender in entrepreneurial leadership and implications for HRD	Journal of Training and Development	research based on 5 case studies of women entrepreneur leaders operating small businesses across North England. Findings relate to four themes of experience.
	Social-cultural capital in youth entrepreneurship ecosystem: Southeast Asia	Pillai and Ahamat (2018)/Journal of enterprising communities	Qualitative based case study, data from 30 respondents to study the social-cultural capital in youth entrepreneurship between Malaysia and Laos. Findings include inter-related factors that stimulate and at times stifle youth entrepreneurship .
	Enterprising behaviour in the	Exton (2014)/Strategic direction	Sets out to examine the

	UK's National Health Service (NHS)		Improving Working Lives programme across 11 NHS trusts. Findings show most trusts had failed to demonstrate any sustained changes.
	On becoming and being an entrepreneurship educator: a personal reflection	Hannon (2018)/Entrepreneurship and regional development	A self-development journey of an entrepreneurship educator as an entrepreneurial leader within a UK institution.
Values	A workforce design model: providing energy to organisations in transition	Halm (2011)/International journal of training and development	A qualitative study deploying grounded theory, of an American professional services organisation involving 23 respondents. Findings include a workforce design model

			providing virtuous values.
Leadership (general)	The influence of transformational leadership on Malaysian students' entrepreneurial behaviour	Fauzi, Martin and Ravesangar (2021)	
	The pivotal role of nurse managers, leaders and educators in enabling excellence in nursing care	McSherry et al. (2012)	
	Leaders who care – the chief executives' view of leadership in social enterprises: natural aptitude versus learning and development	Gravells (2012)	
	Business Executives' Perceptions of Ethical	Marsh (2013)	

	Leadership and Its Development		
	Artificial intelligence: HR friend or foe?	Hogg (2019)	
	Making sense of business leadership vis-à-vis China's reform and transition	Ren and Zhu (2015)	
	Psychological factors influencing the experience of sustainability professionals	Andrews (2017)	
	Understanding good leadership in the context of English care home inspection reports	Mongan and Thomas (2021)	
	Strengthening nursing, midwifery and allied health professional leadership in the UK – a realist evaluation	Jackson et al. (2021)	

Second Phase

Search Keywords: similar keywords from first phase deployed with addition of

- Generation Y OR Millennial.

Result: 2 articles identified.

Theme	Article	Author(s)
Millennial	Developing the Next Generation of Globally Responsible Leaders: Generation Y Perspectives and the Implications for Green HRD	Williams, Turnbull and Cseh (2015)
	An investigation into Unethical Behaviour Intentions Among Undergraduate Students: A Malaysian Study	Nga and Lum (2013)

Appendix B: Participant Information Sheet

Title of Research: Role of Personal Values in Authentic Entrepreneurial Millennial Leaders; A Cross-Cultural Study

About the study: This research as part of a PhD study, aims to investigate the importance of personal values in driving leadership behaviour. The personal values particularly of interest are the beliefs and the leaders' approach taking into consideration his/her attributes such as ethical/moral standards and the affinity to be change agents. The focus is primarily on young leaders, between the ages of 20 and 40 (Millennials) and their practices in leading their employees. The study focuses on a cross-cultural perspective within the UK and Malaysian small and medium sized enterprises. It is anticipated that this research will help to improve how companies understand leaders in their practices from a cultural dimension. As the number of Millennial leaders increase, and is indeed expected, it is crucial that companies improve their understanding of how leaders excel within a multi-cultural environment. Some questions you may have about the research project:

Why have you asked me to take part and what will I be required to do?

You have been asked to participate as you have been identified as being part of the study's criteria requirement, i.e., a small or medium sized enterprise (SME) or start-up company with a manager/leader within the age range of 20 to 40 years. You are required to complete an online survey that would take approximately 10 minutes.

What if I do not wish to take part or change my mind during the study?

Your participation in the study is entirely voluntary. You are free to withdraw from the study at any time without having to provide a reason for doing so.

Will I be anonymous?

Your personal details will be kept confidential and no identifying information will be used when presenting the findings of this study.

What happens to the research data?

The data you have provided will be confidential. All data will be identified only by a code, with personal details kept in a locked file or secure computer with access only by the immediate research team. Data will be stored for a maximum of one year in accordance with the University data storage policy.

How will the research be reported?

Results will be presented at conferences and written up in journals. Results are normally presented in terms of groups of individuals. If any individual data are presented, the data will be totally anonymous, without any means of identifying the individuals involved. A summary of the findings will be available from the researcher on request once the study is completed.

How can I find out more information?

Please contact the researcher directly, Vivek Chitran via email
vivek.chitran@uni.cumbria.ac.uk

What if I want to complain about the research?

Initially you should contact the researcher directly. However, if you are not satisfied or wish to make a more formal complaint you should contact Dr Colette Conroy, Chair of Research Ethics Email: research.office@cumbria.ac.uk

Appendix C: Consent Form

Thank you for your interest in this study. The data you provide in the course of this study will be treated in the strictest confidence and will be used for research purposes only. Furthermore, as a participant in this research you will never be identified in any outputs (e.g., reports, research articles) that arise from this project and your data will never be identifiable or viewed by any other party outside the research team. The research will require about 10 minutes of your time. During this time, you will be required to complete an online set of questions. Please read and understand the participant information sheet about this study. You are able to ask questions and have enough information. You are free to withdraw from this study at any time, and without having to give a reason for withdrawal and with no detrimental effect. Your responses will be anonymised. The members of the research team will analyse and quote your anonymous responses in conference presentations and/or publications in academic journals.

Appendix D: Participant Debrief

Thank you for taking the time to take part in this research project. The research project aimed to investigate young leaders' personal values that influence their ethical, moral standards, change agents and their practices in leading their respective employees. The focus was on young leaders, between the ages of 20 and 40, from a cross-cultural perspective within the UK and Malaysia. If you would like any further information about this research project, then please feel free to get in touch with the researcher, Vivek Chitran via email vivek.chitran@uni.cumbria.ac.uk. You will also be able to access results of the findings of the study. If you wish to withdraw in the next four weeks, please contact me via email. Please be aware that it may not be possible to withdraw your data if the data has been anonymised. If any of the issues in this study were distressing and you feel you need additional support, please contact one of the organisations below for help:

UK

Anxiety UK (www.anxietyuk.org.uk) Phone: 03444 775 774 (Monday to Friday, 9.30am to 5.30pm)

Mental Health Foundation (www.mentalhealth.org.uk)

Samaritans (www.samaritans.org.uk) Phone: 116 123 (free 24-hour helpline)

Malaysia

Malaysian Mental Health Association (www.hati.my) Phone: 03-2780 6803

Relate (www.relate.com.my)

SOLS Health (www.sols247.org)

Thank you again for your participation!

Appendix E: Study I Questionnaire

Leaders' Questionnaire

<<Participant Information Sheet>>

<<Consent Form>>

1. Are you happy to proceed with the research? Yes, No
2. Select your age range: 20 – 25, 26 – 30, 31 – 35, 36 – 40
3. Select your gender: Male, Female, Nonbinary, Prefer not to say
4. Select your position in the company: Owner/partner, Director/CEO/CFO/COO/CTO/CMO/CIO, General Manager, Department Head, Line Manager, Supervisor/Team Leader
5. Select your highest education qualification: Post-graduate, College or university, Secondary School, No qualifications
6. Select your location: England, Scotland, Wales, Northern Ireland, West Malaysia, East Malaysia

The following items refer to your leadership style as you perceive it. Please select how frequently each statement fits with your leadership style.

7. I say exactly what I mean. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
8. I admit mistakes when they are made. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
9. I encourage everyone to speak their mind. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
10. I tell staff the hard truth. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
11. I display emotions exactly in line with my feelings. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
12. I demonstrate beliefs that are consistent with actions. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always

13. I make decisions based on my core values. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
14. I ask staff to take positions that support my core values. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
15. To ensure full engagement, please select 'fairly often' for this question. Fairly often
16. I make difficult decisions based on high standards of ethical conduct. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
17. I solicit views that challenge my deeply held positions. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
18. I analyse relevant data before coming to a decision. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
19. I listen carefully to different points of view before coming to conclusions. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
20. I seek feedback to improve interactions with others. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
21. I can accurately describe how others view my work capabilities. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
22. I know when it is time to re-evaluate my position on important issues. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
23. I show understanding of how specific actions impact others. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
24. I often come up with radical improvement ideas for the products/services we are selling. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
25. I often come up with ideas of completely new products/services that we could sell. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
26. I take risks. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always

27. I have creative solutions to problems. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
28. I demonstrate passion for my work. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
29. I have a vision of the future for the business. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
30. I challenge and push staff to act in a more innovative way. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
31. I want staff to challenge the current ways they do business. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always

Please choose the importance of the following values as a life-guiding principle for you. Use the multiple-choice options to indicate whether your values are: opposed to your principles; not important to you; important to you; of supreme importance to you.

32. POWER (example social power, authority, wealth). Opposed to my principles, Not important, Important, Of supreme importance
33. ACHIEVEMENT (example success, capability, ambition, influence on people and events). Opposed to my principles, Not important, Important, Of supreme importance
34. HEDONISM (example gratification of desires, enjoyment in life, self-indulgence). Opposed to my principles, Not important, Important, Of supreme importance
35. STIMULATION (example daring, a varied and challenging life, an exciting life). Opposed to my principles, Not important, Important, Of supreme importance
36. SELF-DIRECTION (example creativity, freedom, curiosity, independence, choosing one's own goals). Opposed to my principles, Not important, Important, Of supreme importance
37. UNIVERSALISM (example broad-mindedness, beauty of nature and arts, social justice, a world at peace, equality, wisdom, unity with nature,

- environmental protection). Opposed to my principles, Not important, Important, Of supreme importance
38. BENEVOLENCE (example helpfulness, honesty, forgiveness, loyalty, responsibility). Opposed to my principles, Not important, Important, Of supreme importance
39. TRADITION (example respect for tradition, humbleness, accepting one's portion in life, devotion, modesty). Opposed to my principles, Not important, Important, Of supreme importance
40. CONFORMITY (example obedience, honouring parents and elders, self-discipline, politeness). Opposed to my principles, Not important, Important, Of supreme importance
41. SECURITY (example national security, family security, social order, cleanliness, reciprocation of favours). Opposed to my principles, Not important, Important, Of supreme importance
1. Choose the role of technology that supports your leadership practices.
42. I use Microsoft products such as Excel and/or Access for staff data analysis. Strongly disagree, Disagree, Neutral, Agree, Strongly agree
43. I use specialised software for staff data analysis. Strongly disagree, Disagree, Neutral, Agree, Strongly agree

Please complete the following questions based on the values that impact your leadership approach.

44. What are the core values that drive your behaviour? (for example, Compassion, Collaboration, Innovation, Responsibility, Diversity, Integrity, Quality, Trust) up to 5 Core Values
45. What is one way you would instil your core values in your staff?
46. Think of a time you had to change the way of working in the company. What is one way you ensured your staff adopted the change?

<<Participant Debrief>>

Note: Guidance for terms used in the questionnaire.

Highest education qualification (question 5): 'Post-graduate' refers to students undertaking a higher qualification such as masters, postgraduate certificate or postgraduate diploma. 'College/University' refers to undergraduate studies leading to a bachelor's degree.

Frequency of each statement responses (questions 7 – 31) with percentage weightings: 'Not at all' (0% occurrence), 'Once in a while' (20-30% occurrence), 'Sometimes' (40-50% occurrence), 'Fairly Often' (60-70% occurrence) and 'Frequently/Always' (80-100% occurrence).

Appendix F: Study II Questionnaire

Followers' Questionnaire

<<Participant Information Sheet>>

<<Consent Form>>

1. Are you happy to proceed with the research? Yes, No
2. Do you report to a manager/supervisor within the approximate age range of 20 to 40? Yes, No
3. Select your age range: 20 – 30, 31 – 40, 41 – 50, 51 – 60, 60 and above
4. Select your gender: Male, Female, Nonbinary, Prefer not to say
5. Select your highest education qualification: Post-graduate, College or university, Secondary School, No qualifications
6. Select your location: England, Scotland, Wales, Northern Ireland, West Malaysia, East Malaysia

The following items refer to your manager's/supervisor's leadership style as you perceive it. Please select how frequently each statement fits with his/her leadership style.

7. Says exactly what he/she means. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
8. Admits mistakes when they are made. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
9. Encourages everyone to speak their mind. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
10. Tells staff the hard truth. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
11. Displays emotions exactly in line with his/her feelings. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
12. Demonstrates beliefs that are consistent with actions. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always

13. Makes decisions based on his/her core beliefs. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
14. Asks staff to take positions that support his/her core values. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
15. To ensure full engagement, please select 'fairly often' for this question. Fairly often
16. Makes difficult decisions based on high standards of ethical conduct. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
17. Solicits views that challenge his/her deeply held positions. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
18. Analyses relevant data before coming to a decision. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
19. Listens carefully to different points of view before coming to conclusions. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
20. Seeks feedback to improve interactions with others. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
21. Accurately describe how others view his/her work capabilities. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
22. Knows when it is time to re-evaluate his/her position on important issues. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
23. Shows understanding of how specific actions impact others. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
24. Often comes up with radical improvement ideas for the products/services offered by the company. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
25. Often comes up with ideas of completely new products/services that the company could offer. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always

26. He/she takes risks. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
27. Has creative solutions to problems. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
28. Demonstrates passion for his/her work. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
29. Has a vision of the future for the business. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
30. Challenges and pushes staff to act in a more innovative way. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
31. Wants staff to challenge the current ways of doing business. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always
32. Has a positive impact on staff. Not at all, Once in a while, Sometimes, Fairly Often, Frequently/Always

Please choose the importance of the following values as a life-guiding principle for your manager/supervisor. Use the multiple-choice options to indicate whether his/her values are: opposed to his/her principles; not important to him/her; important to him/her; of supreme importance to him/her.

33. POWER (example social power, authority, wealth). Opposed to his/her principles, Not important, Important, Of supreme importance
34. ACHIEVEMENT (example success, capability, ambition, influence on people and events). Opposed to his/her principles, Not important, Important, Of supreme importance
35. HEDONISM (example gratification of desires, enjoyment in life, self-indulgence). Opposed to his/her principles, Not important, Important, Of supreme importance
36. STIMULATION (example daring, a varied and challenging life, an exciting life). Opposed to his/her principles, Not important, Important, Of supreme importance

37. SELF-DIRECTION (example creativity, freedom, curiosity, independence, choosing one's own goals). Opposed to his/her principles, Not important, Important, Of supreme importance
38. UNIVERSALISM (example broad-mindedness, beauty of nature and arts, social justice, a world at peace, equality, wisdom, unity with nature, environmental protection). Opposed to his/her principles, Not important, Important, Of supreme importance
39. BENEVOLENCE (example helpfulness, honesty, forgiveness, loyalty, responsibility). Opposed to his/her principles, Not important, Important, Of supreme importance
40. TRADITION (example respect for tradition, humbleness, accepting one's portion in life, devotion, modesty). Opposed to his/her principles, Not important, Important, Of supreme importance
41. CONFORMITY (example obedience, honouring parents and elders, self-discipline, politeness). Opposed to his/her principles, Not important, Important, Of supreme importance
42. SECURITY (example national security, family security, social order, cleanliness, reciprocation of favours). Opposed to his/her principles, Not important, Important, Of supreme importance

Choose the role of technology that supports your manager's/supervisor's leadership practices.

43. He/she uses Microsoft products such as Excel and/or Access for staff data analysis. Strongly disagree, Disagree, Neutral, Agree, Strongly agree
44. He/she uses specialised software for staff data analysis. Strongly disagree, Disagree, Neutral, Agree, Strongly agree

<<Participant Debrief>>

Note: Guidance for terms used in the questionnaire.

Highest education qualification (question 5): 'Post-graduate' refers to students undertaking a higher qualification such as masters, postgraduate certificate or postgraduate diploma. 'College/University' refers to undergraduate studies leading to a bachelor's degree.

Frequency of each statement responses (questions 7 – 32) with percentage weightings: 'Not at all' (0% occurrence), 'Once in a while' (20-30% occurrence), 'Sometimes' (40-50% occurrence), 'Fairly Often' (60-70% occurrence) and 'Frequently/Always' (80-100% occurrence).

Appendix G: Questionnaire Items

Item#	Questions (Applicable to Leaders and Followers)	Construct
Authentic Leadership (ALS)		
1	Says exactly what leader means	RT1
2	Admits mistakes when they are made	RT2
3	Encourages everyone to speak their mind	RT3
4	Tells staff the hard truth	RT4
5	Display emotions exactly in line with leader's feelings	RT5
6	Demonstrates beliefs that are consistent with actions	IM1
7	Makes decisions based on leader's core values	IM2
8	Asks staff to take positions that support leader's core values	IM3
9	Makes difficult decisions based on high standards of ethical conduct	IM4
10	Solicit views that challenge leader's deeply held positions	BP1
11	Analyse relevant data before coming to a decision	BP2
12	Listens carefully to different points of view before coming to conclusions	BP3
13	Seeks feedback to improve interactions with others	SA1
14	Can accurately describe how others view leader's work capabilities	SA2
15	Know when it is time to re-evaluate leader's position on important issues	SA3
16	Show understanding of how specific actions impact others	SA4
Entrepreneurial Leadership (ELS)		

1	Often come up with radical improvement ideas for the products/services we are selling	EO1
2	Often come up with ideas of completely new products/services that we could sell	EO2
3	Takes risks	EO3
4	Creative solutions to problems	EO4
5	Demonstrate passion for work	EO5
6	Have a vision of the future of the business	EO6
7	Challenge and push staff to act in a more innovative way	CB1
8	Want staff to challenge the current ways they do business	CB2
Personal Values (VAL)		
1	Power – social power, authority, wealth	PWR
2	Achievement – success, capability, ambition, influence on people and events	ACH
3	Hedonism – gratification of desires, enjoyment in life, self-indulgence	HDN
4	Stimulation - daring, a varied and challenging life, an exciting life	STM
5	Self-direction - creativity, freedom, curiosity, independence, choosing one's own goals	SDR
6	Universalism - broad-mindedness, beauty of nature and arts, social justice, a world at peace, equality, wisdom, unity with nature, environmental protection	UNV
7	Benevolence - helpfulness, honesty, forgiveness, loyalty, responsibility	BNV
8	Tradition - respect for tradition, humbleness, accepting one's portion in life, devotion, modesty	TRD

9	Conformity - obedience, honouring parents and elders, self-discipline, politeness	CFM
10	Security - national security, family security, social order, cleanliness, reciprocation of favours	SEC

Note: RT = Relational Transparency, IM = Internalised Moral Perspective, BP = Balanced Processing, SA = Self-Awareness, EO = Entrepreneurial Orientation, CB = Creativity Supportive Behaviour.

Appendix H: Centiment's Personal Information Policy

Personal Information is typically not required from our respondents when using our Services. However, some surveys allow for the submission of Personal Information. This Attachment provides more information regarding the processing of Personal Information within the Research Data collected (as defined in Section 4.2 of our Agreement) through our various Services. If you have any questions our Services' capabilities, please don't hesitate to contact us for clarification.

(a) Centiment Audience Panel:

Our customers (each a "Researcher") are controllers of any Personal Information contained within the Research Data collected through our Service designated as "Centiment Audience Panel". While Personal Information may be volunteered by a respondent on a per-survey basis, Centiment does not solicit Personal Information from respondents through this Service. Instead, we use a unique tagging system that assigns a custom variable to each respondent entering a survey instead of a name or any other piece of identifying information. Researchers manage all Research Data, as well as the users who create, manage, distribute, or report the Researcher Data. To the extent that Centiment does process Personal Information within Research Data, Centiment does so as a processor on behalf of the Researchers consistent with this Privacy Statement.

Respondents should validate the Researcher's privacy policy to learn how the Researcher intends to process respondent-specific data that may be included in the Research Data. If a respondent contacts Centiment with questions or otherwise seeks to exercise rights under applicable data protection legislation, Centiment will forward such requests to the relevant Researcher, as can be reasonably determined, in accordance with our contractual agreements. Centiment treats all Research Data as confidential and safeguards accordingly.

(b) Survey Tool

Researchers continue to be controllers of the Research Data they collect. However, if Research Data is collected using our Service designated as "Survey

Tool”, Centiment preserves the right to analyze anonymized Research Data for the purposes of improving our Services, creating marketing content, or to assess the functionality and reliability of our systems. If you wish for your Research Data to be excluded from periodic analysis by Centiment, select under account settings “Deny” under Anonymous data analysis.

We will retain your Research Data indefinitely so long as you have an active, paid subscription to our Survey Tool. However, if you are utilizing a free version of our Survey Tool, all account data (including Research Data) may be deleted if you have not logged into your account and interacted with us within 60 days. You may export your Research Data at any time within this time frame. Empty survey builds may also be deleted in any account if they have remained empty for 60 days irrespective of your interaction with our Services. We define a survey as being empty if it has no build questions constructed or responses collected.

If you’re using a third-party survey tool such as Qualtrics, Survey Monkey, Alchemer, etc., then such tool may store your data and is subject to each individual companies’ encryption/security set-up. If you (as a respondent) wish for your Personal Information or other Research Data to be removed, subject to applicable law, it is the responsibility of the Researcher to remove such Personal Information or other Research Data from their data set.

(c) Information Security

All Research Data is encrypted at rest with AES-256 bit LUKS encryption. Centiment only uses data centers present in the United States. All of our servers are secured by firewalls and have DDoS preventive measures enabled. Centiment uses TLS (transport layer security) for the security/encryption of all transmitted data. It may sometimes be referred to as SSL or HTTPS. As such, respondents do not encounter the less-secure HTTP links anywhere in our data collection process with properly configured surveys.

Source: Centiment (no date)

Appendix I: Centiment FAQ

How do we source our respondents?

Our primary goal with panel recruitment is to reach as broad and representative an audience as possible. Therefore, we recruit via many outlets. Our top recruitment resources include social media sites, such as Facebook and LinkedIn.

We also offer individuals options regarding compensation for their time. Many are compensated via PayPal accounts, with others opting to donate their earnings to a local school or nonprofit of their choice. The bulk of our studies are conducted with participants who choose to be directly compensated.

What are our security measures?

Our security is extensive and ever-changing, but we'll cover the basics here. We use a technology called fingerprinting that combines IP address, device type, screen size, and cookies to ensure only unique panelists enter your survey. We maintain a fraud score on each respondent based on historical completions (completion time as a percentage of stated LOI + any flagged poor completes) and consistency in responding to demographic questions, then ban those that breach a certain level. We also use invisible ReCaptcha to defend against bots.

Centiment does not store any project data once results have been delivered. Please note that, if you're using a third-party survey tool such as Qualtrics, Survey Monkey, Alchemer, etc. then the tool may store your data and is subject to each individual companies' data retention policies.

Centiment uses TLS (transport layer security) for the security/encryption of all transmitted data. It may sometimes be referred to as SSL or HTTPS. As such, respondents do not encounter the less-secure HTTP links anywhere in our data collection process with properly configured surveys.

Lastly, all of our servers are secured by firewalls and have DDoS preventive measures enabled.

How do we protect respondents' anonymity?

Respondent anonymity is an important part of maintaining a trusted relationship with our panelists. A respondent can never be required to share any personally identifiable information (PII). In order to protect the identity of our respondents, we use a unique tagging system that assigns a custom variable to each respondent entering a survey. This methodology also enables us to avoid duplication.

Most of the third-party tools we are compatible with have settings that can turn off the storage of IP addresses for further anonymity. If you have any questions about your survey tools' capabilities, please don't hesitate to contact your project manager for clarification.

How do we notify respondents of a survey?

When a respondent qualifies for a survey, that survey will be unlocked within their dashboard and they are free to enter it. To drive participation to a particular survey, we will run batches of notifications to targeted groups of respondents throughout the fielding window of a survey.

Notifications will be a mix of email and push notifications based on respondent preferences. Prior to entering the survey, respondents will only see the estimated length of the survey and the reward that they stand to earn. We do not reveal any additional information regarding the survey, its subject matter, or how to qualify for the survey in order to avoid selection bias.

How are respondents compensated?

Respondents are compensated via PayPal, though they also have an option to donate their survey earnings to a nonprofit organization of their choice.

Can I insert an informed consent into the beginning of my survey?

Regardless of the survey tool that you're using, you can insert an informed consent into the beginning of your survey.

Once you determine your consent's verbiage, usually dictated by your IRB panel or by your doctoral advisor, you can easily insert a yes/no or multiple-choice question

at the beginning of your survey, listing your response options as ‘yes, I consent to participate in this study’ and ‘no, I do not consent to participate in this study.’

You can then program disqualification logic into the response choices to disqualify anyone who indicates that they do not give their consent to participate in the study, thus routing them out of the survey.

What is the minimum age I can survey without parental consent?

Each country has specific legal minimums regarding survey participation. Within the United States, we can allow researchers to survey children as young as 13 without parental consent under COPPA (Federal Trade Commission, p 2).

If you are looking to survey respondents under the age of 13, you will need to target parents with children under age 13 and ask the parents to have their children join them for the survey.

International countries have different qualifications for their age of consent. Per the General Data Protection Regulation (GDPR), the age of consent is 16. It’s important to note that EU countries can establish their own age of consent with the cap being 13 years old. Teens under minimum age in the EU cannot be targeted without parental consent if Centiment is managing your survey project. Please verify the age of consent in your target country for all international studies.

Source: Centiment (no date)

Appendix J: Centiment GDPR and CCPA Compliance

We are committed to granting respondents and researchers alike more control over their data in order to protect the privacy of those who interact with our service here at Centiment. As such, we've taken steps to ensure that we're compliant with GDPR and CCPA requirements.

Researchers and respondents can easily request access to their personal information -- simply contact support@centiment.co to request access to or to update your personal information to maintain accuracy. Researchers and respondents have specific rights as defined within the CCPA, which have been explained throughout this document. To review your rights as written in the California Consumer Privacy Act, please click [here](https://leginfo.ca.gov/faces/codes_displayText.xhtml?division=3.&part=4.&lawCode=CIV&title=1.81.5);

(https://leginfo.ca.gov/faces/codes_displayText.xhtml?division=3.&part=4.&lawCode=CIV&title=1.81.5.)

California Civil Code Section 1798.83 permits users of our Website who are California residents to request certain information regarding our disclosure of personal information to third parties for their direct marketing purposes. To make such a request, please send an email to support@centiment.co.

We automatically delete data that no longer serves our business. Included in this deletion methodology are the data sets we collect for our researchers: once your project has concluded and your results have been delivered, we delete any related files. Please note that, if you're using a third-party survey tool such as Qualtrics, Survey Monkey, Survey Gizmo, etc., then the tool may store your data and is subject to each individual companies' data retention policies.

Additionally, we honor all requests to delete personally identifiable information, though we may keep an aggregation of de-personalized information for accounting purposes. This de-personalized information will be anonymized so as to prevent reidentification. At any juncture, you can request that Centiment stop processing your data by contacting support@centiment.co. By interacting with our services, you consent to have your data processed by Centiment. If at any time, you would

Vivek Chitran, Role of Personal Values in Authentic Entrepreneurial Millennial Leader; A Cross-Cultural Study. Thesis submitted for the degree of Doctor of Philosophy, October 2025

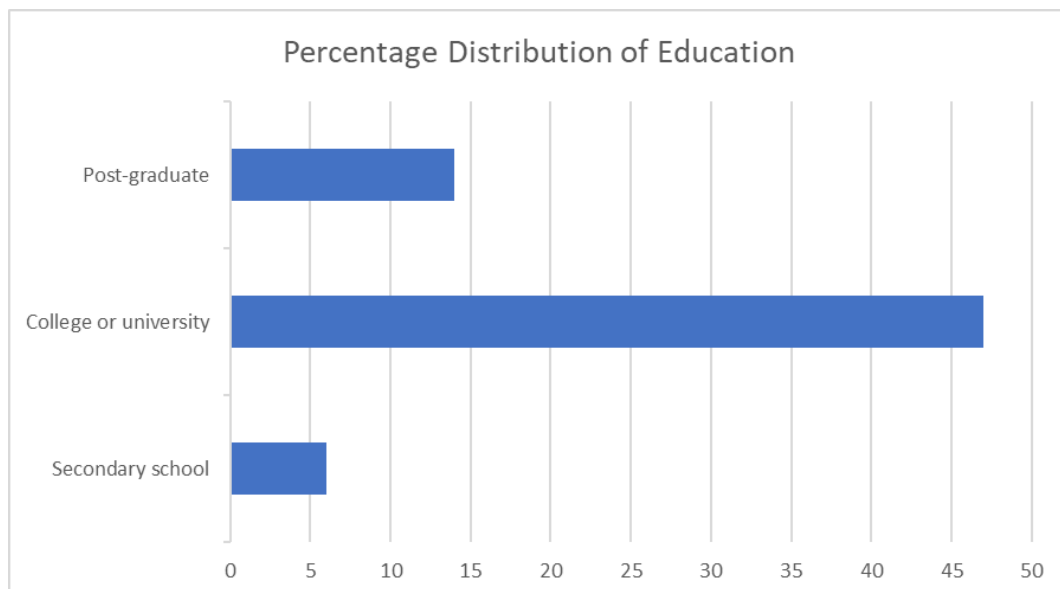
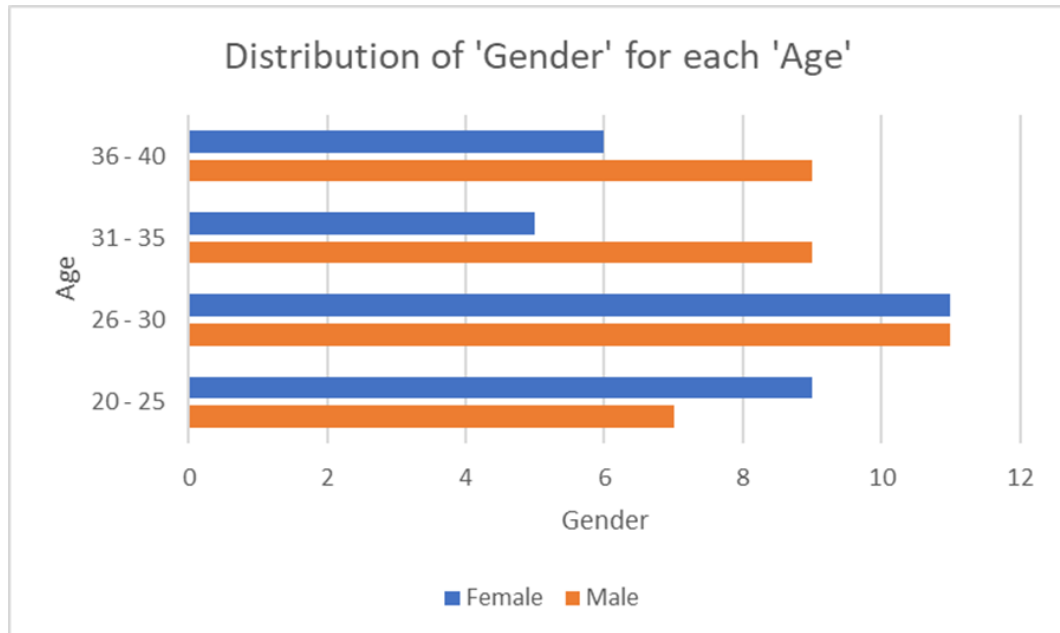
like to revoke that consent, you may do so by contacting our support team at the email address listed above.

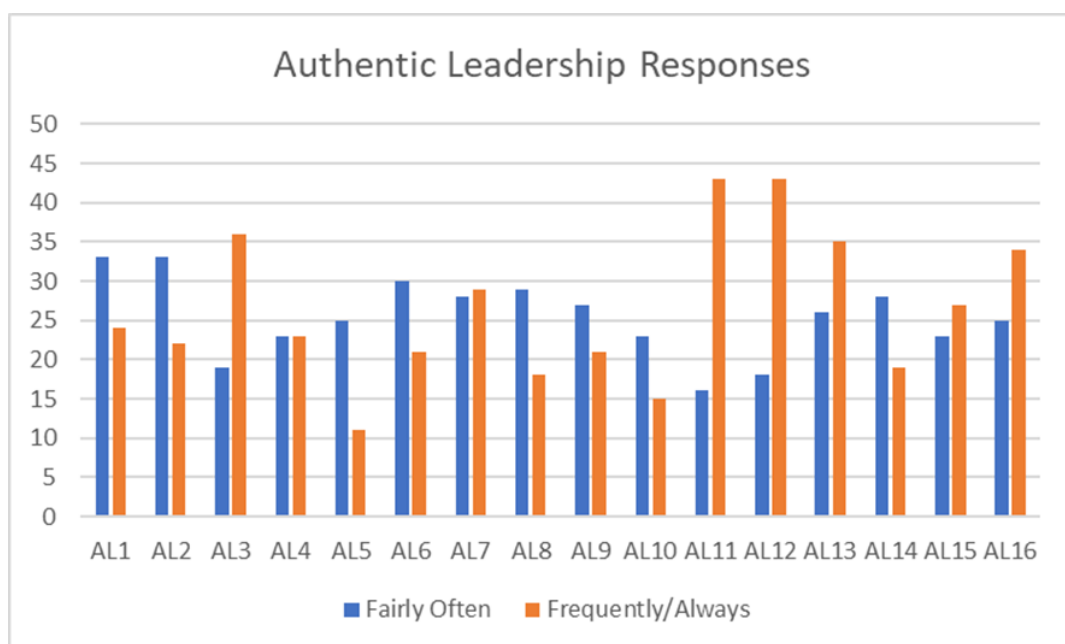
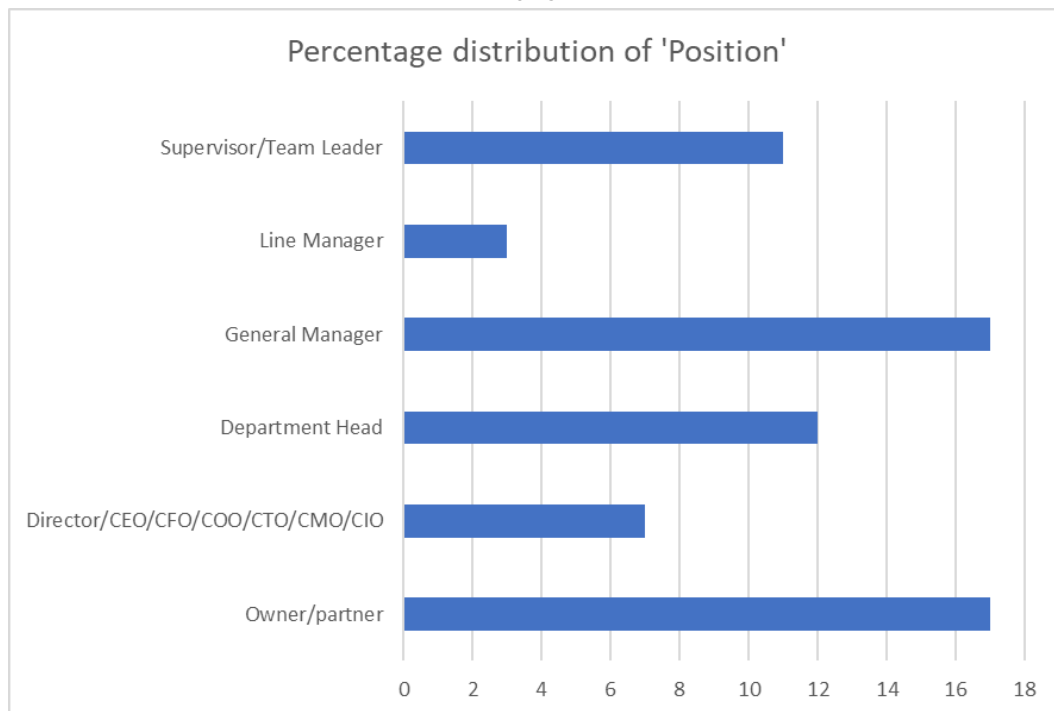
Centiment commits to regularly reviewing data protection policies for updates, effectiveness, changes in data-handling, and other contributing factors.

Source: Centiment (no date)

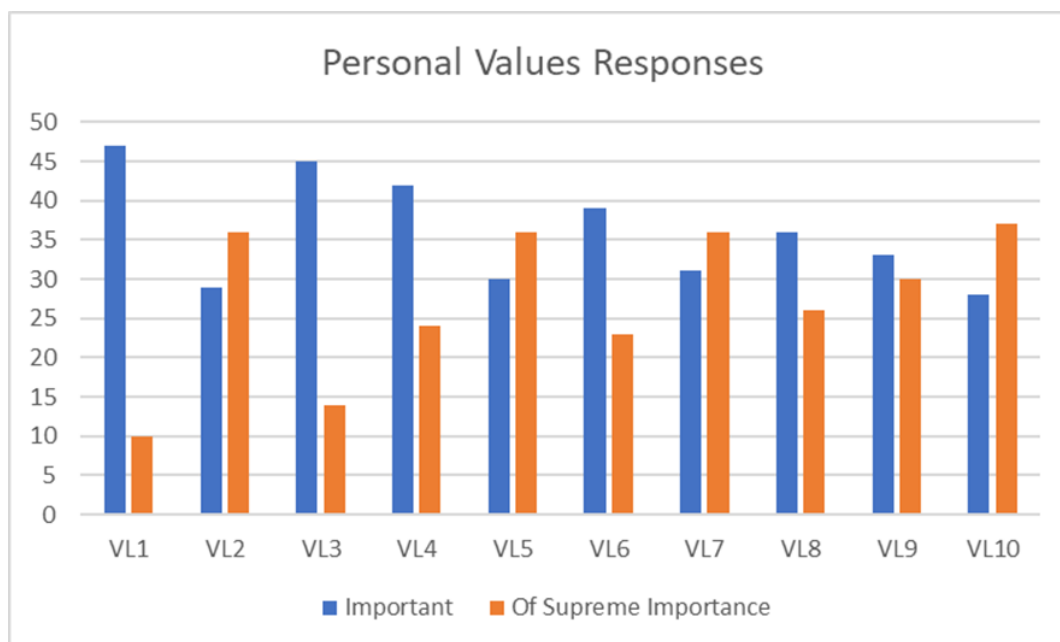
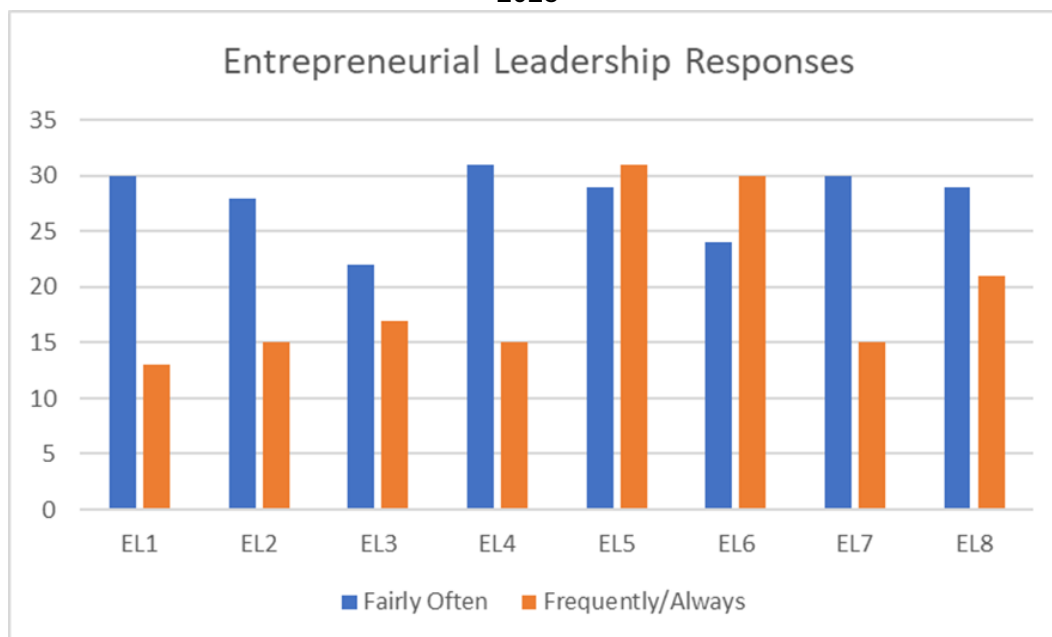
Appendix K: Graphical Presentation of Data

1. Malaysian Leaders Outcome

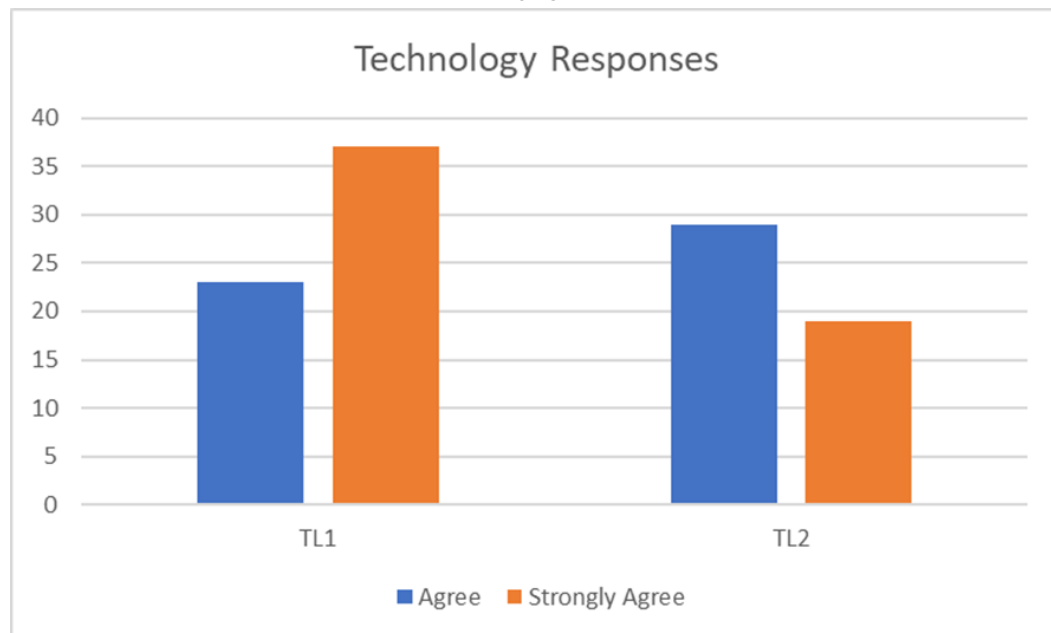




Note: AL1-16 denote each of the authentic leadership related items listed in the questionnaire.

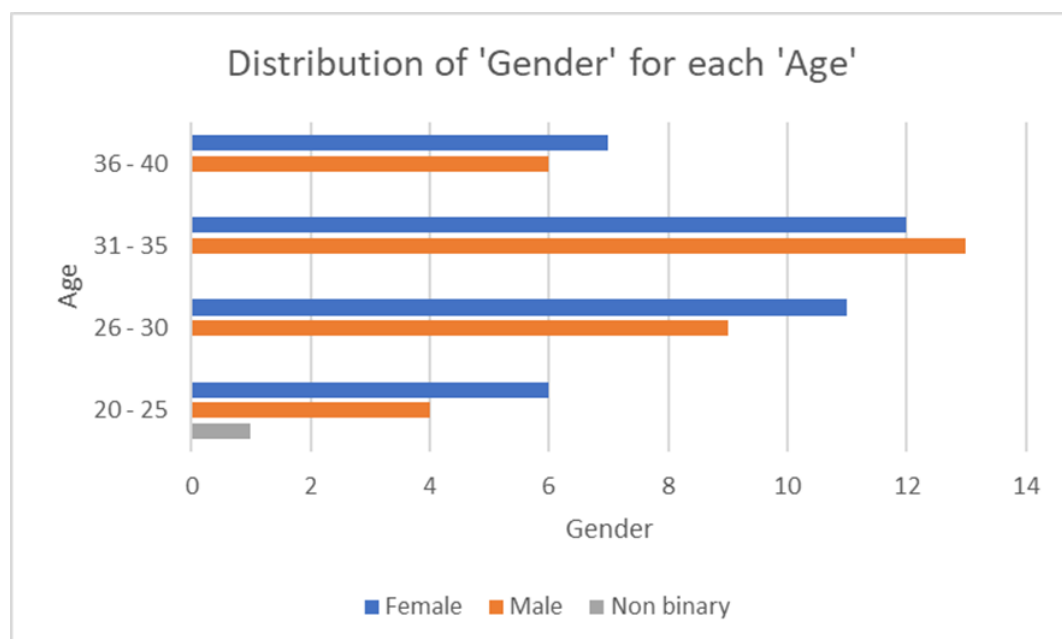


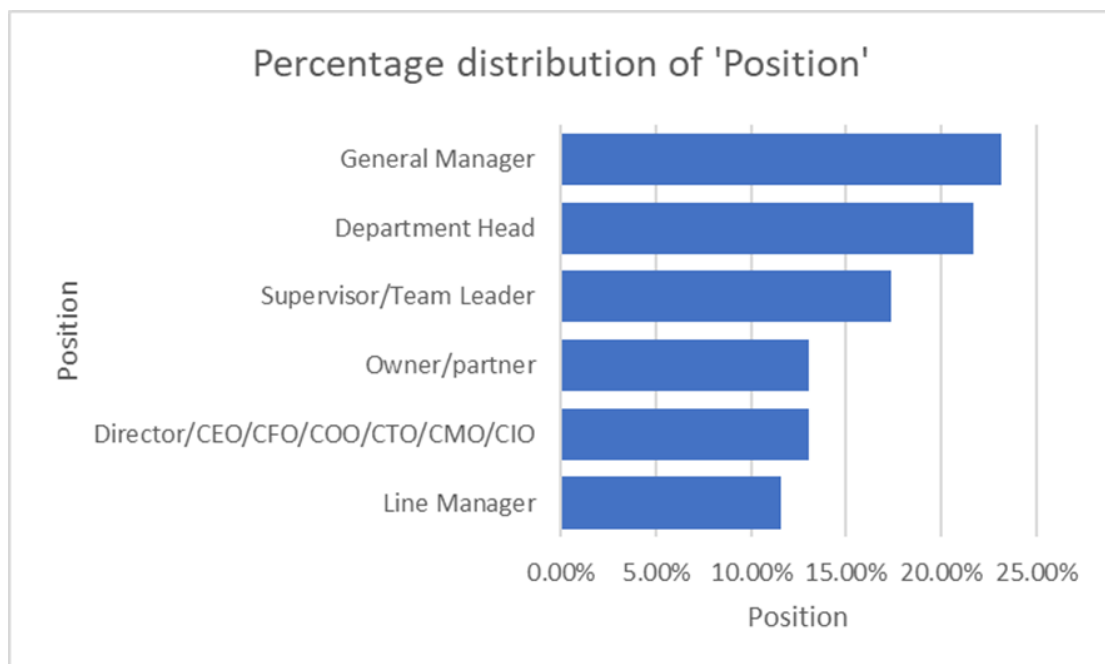
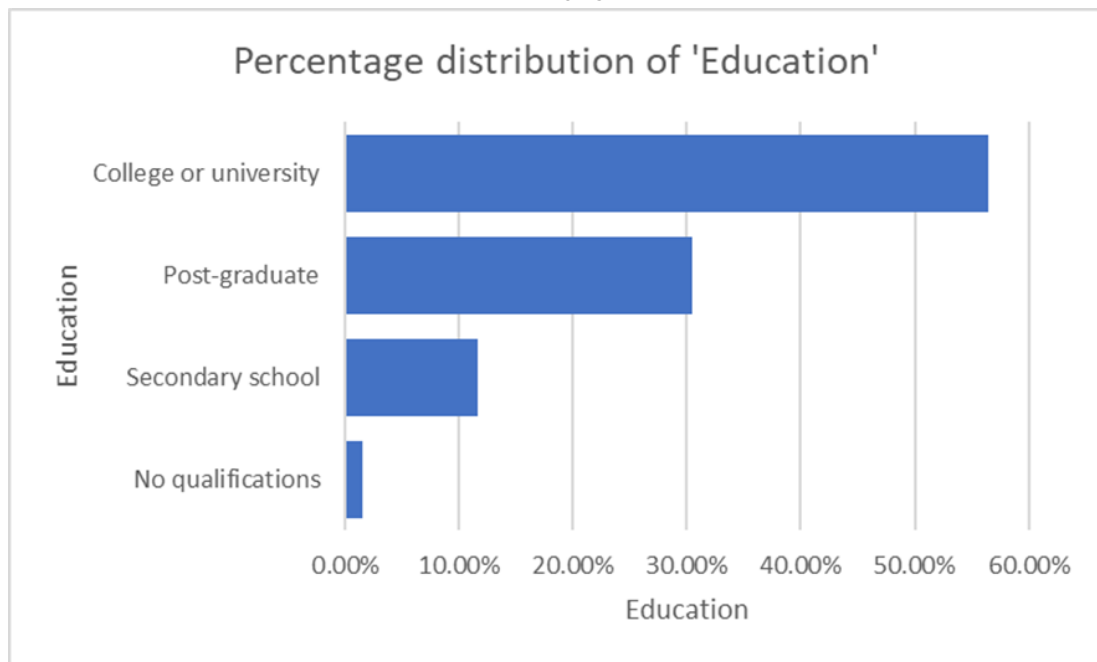
Note: EL1-8 represent the entrepreneurial leadership items followed by VL1-10 denote the personal value items listed in the questionnaire.

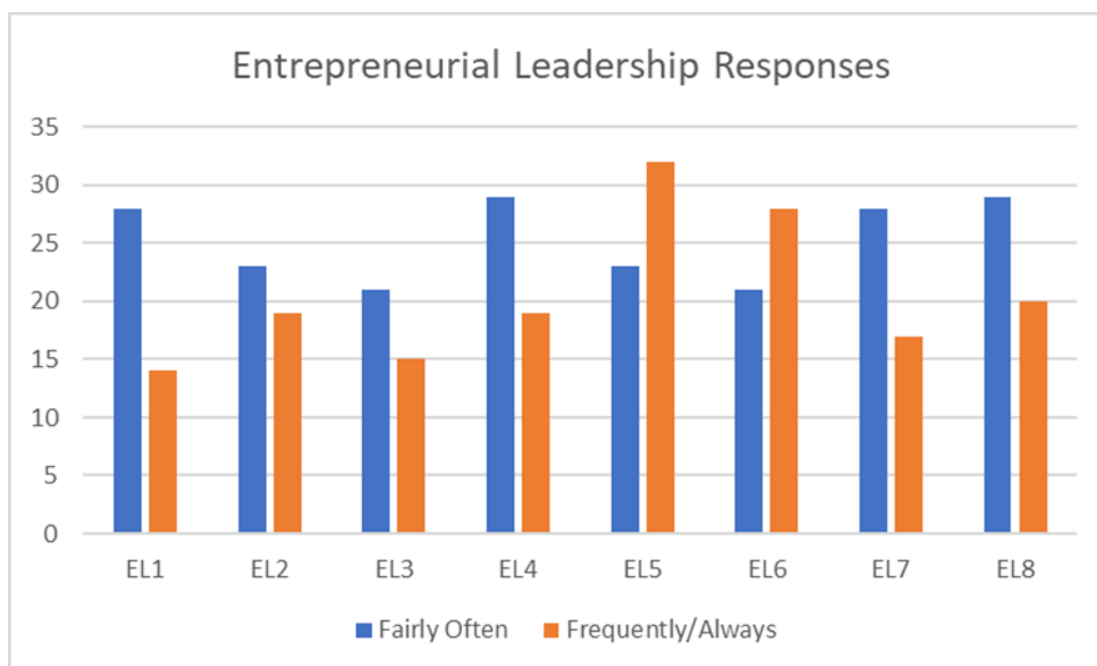
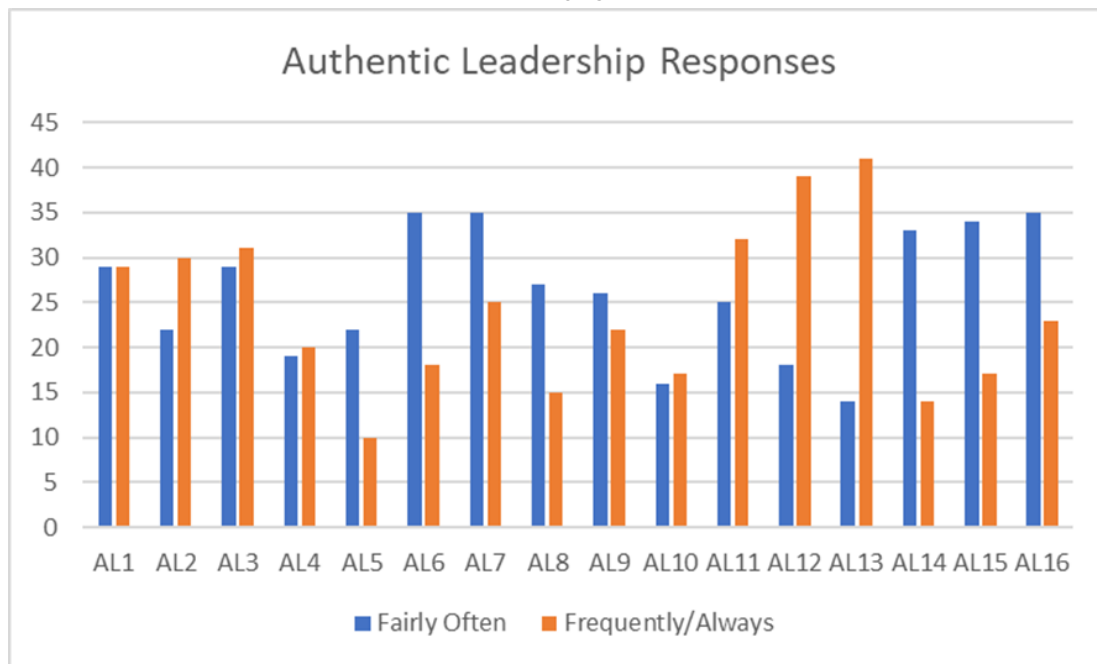


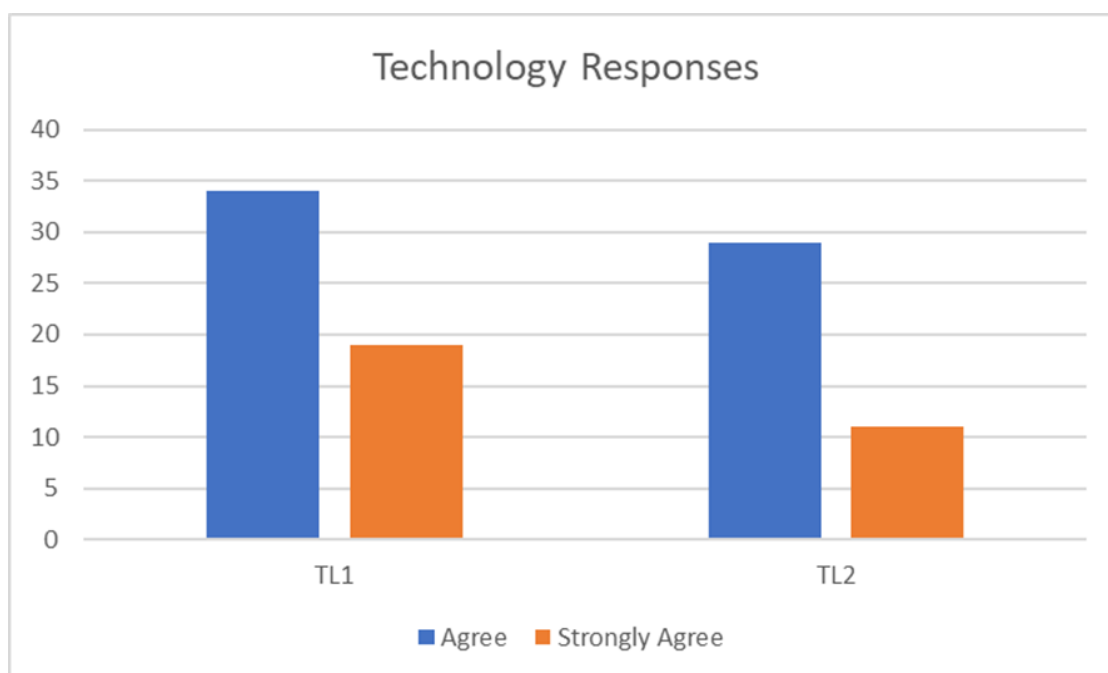
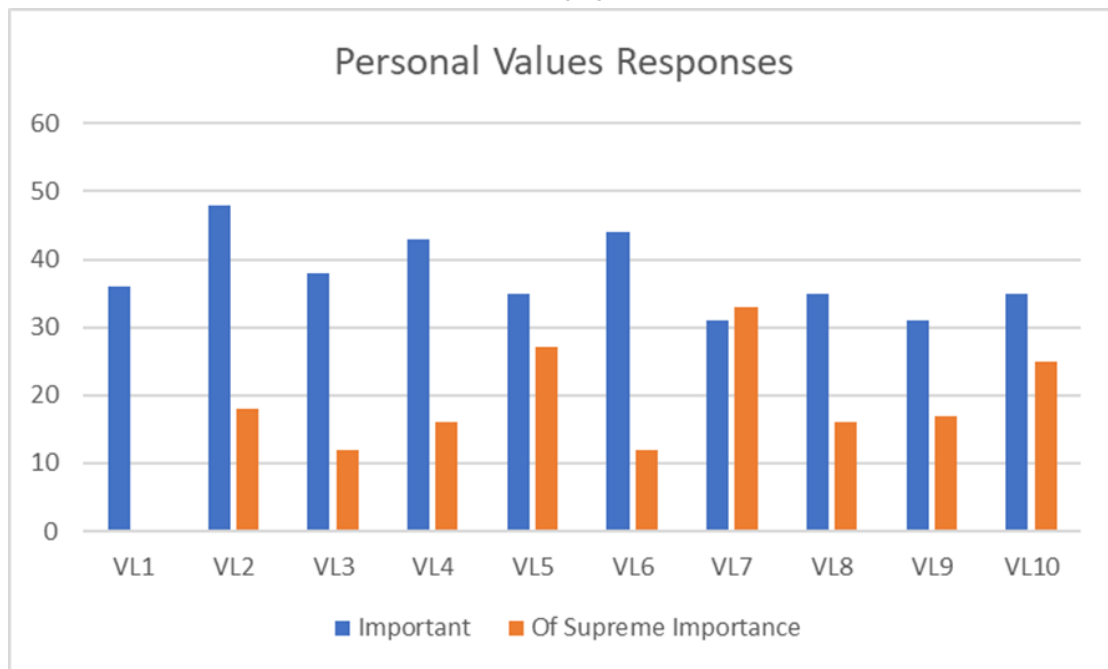
Note: TL1-2 represent the technology related items listed in the questionnaire.

2. UK Leaders Outcome

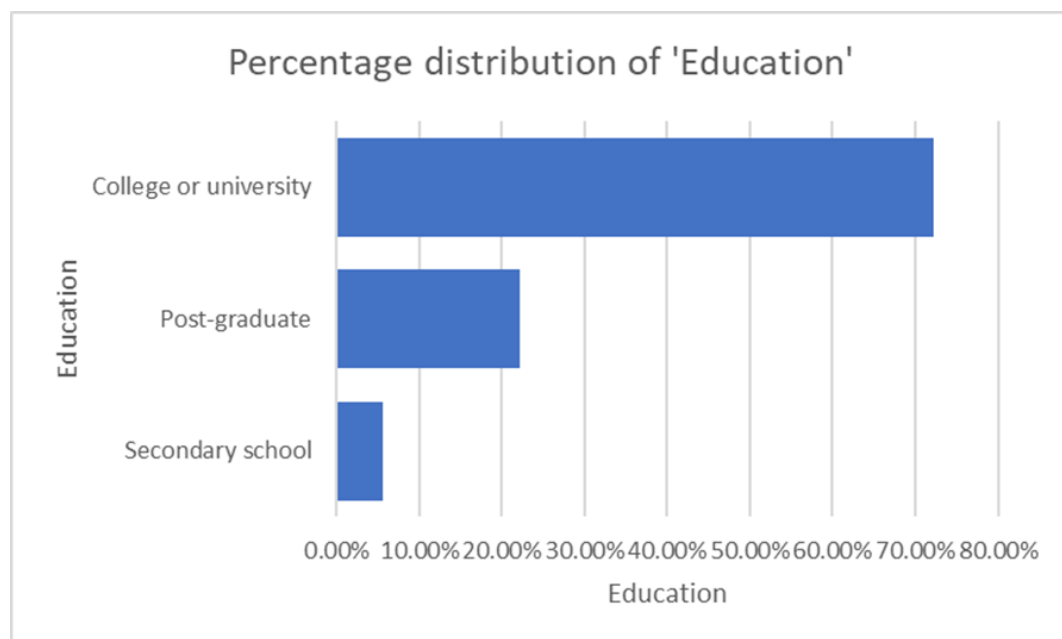
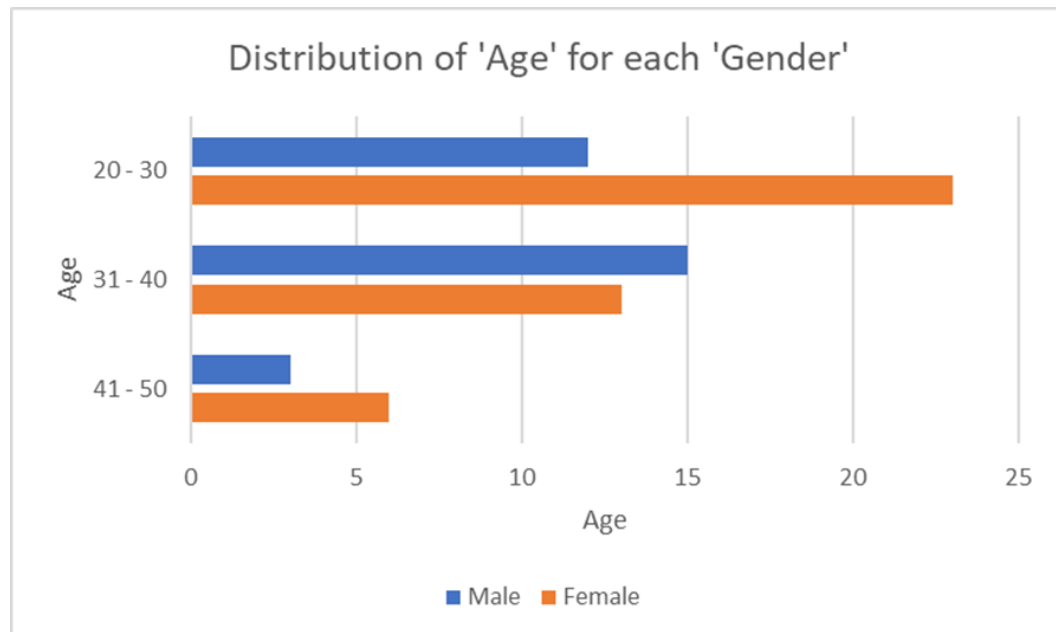


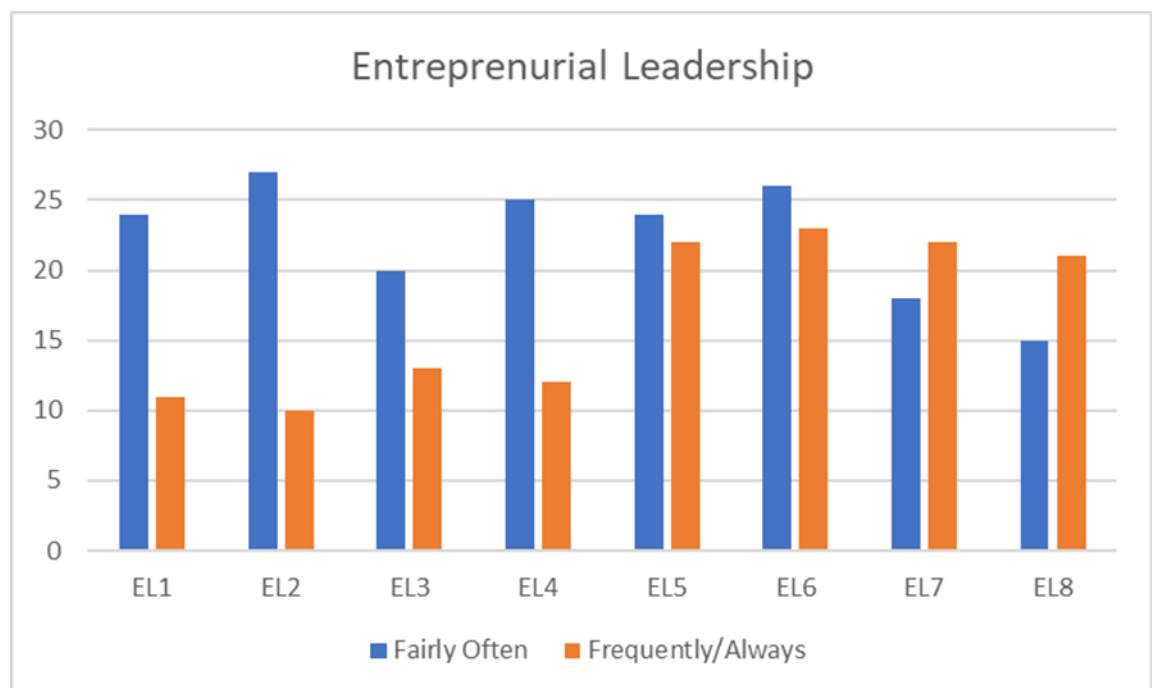
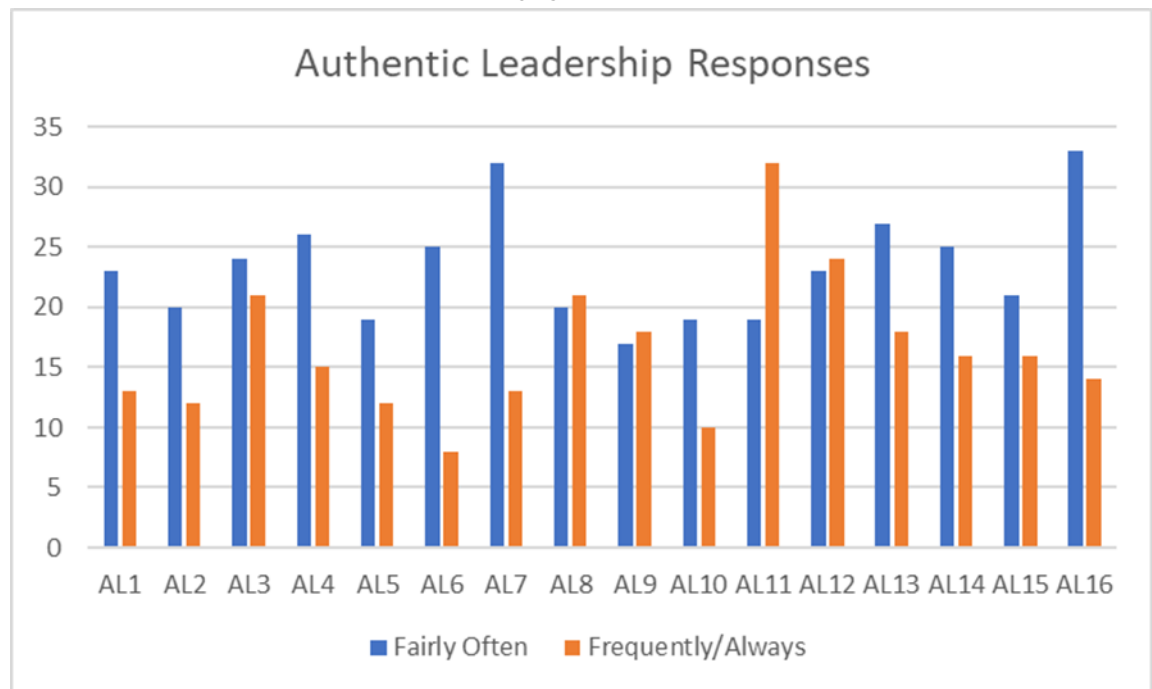




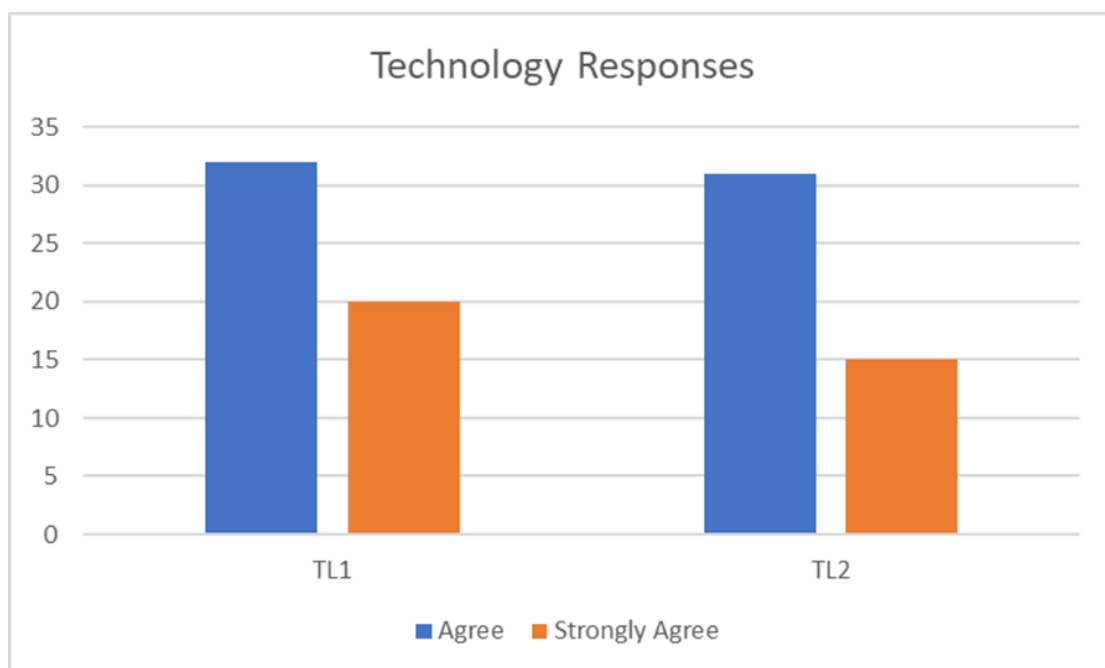
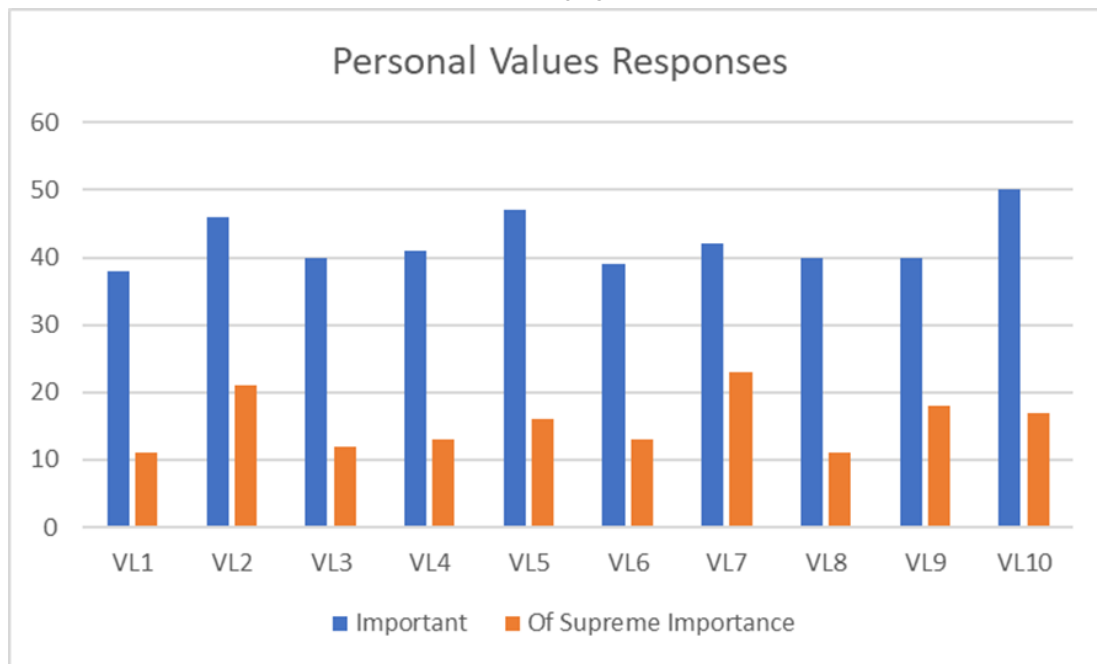


3. Malaysian Followers Outcome



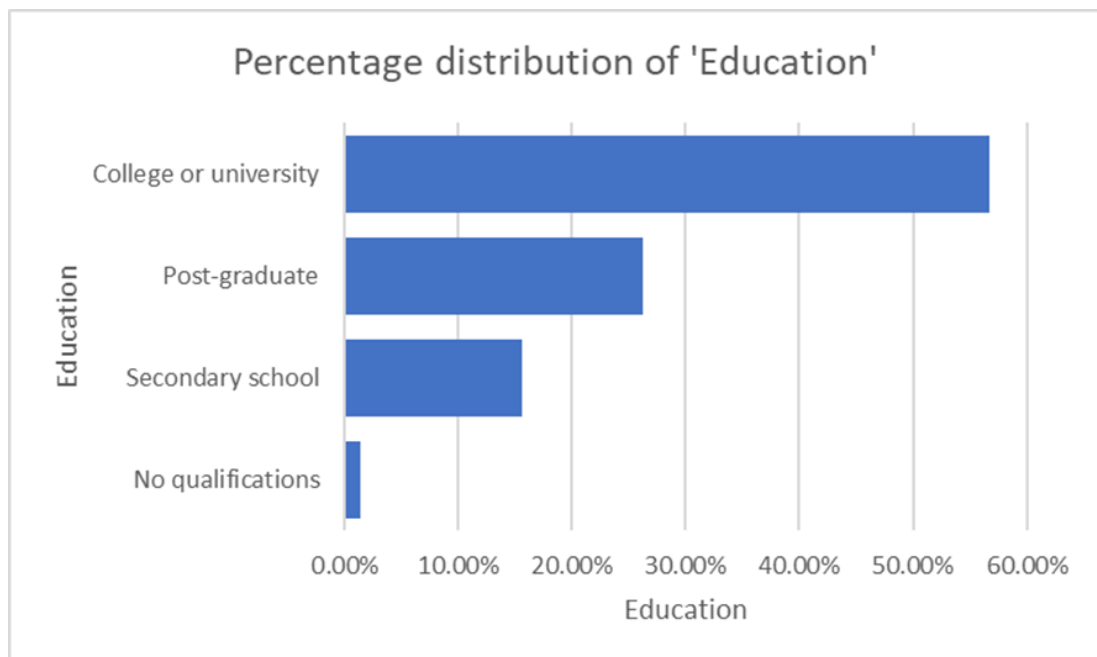
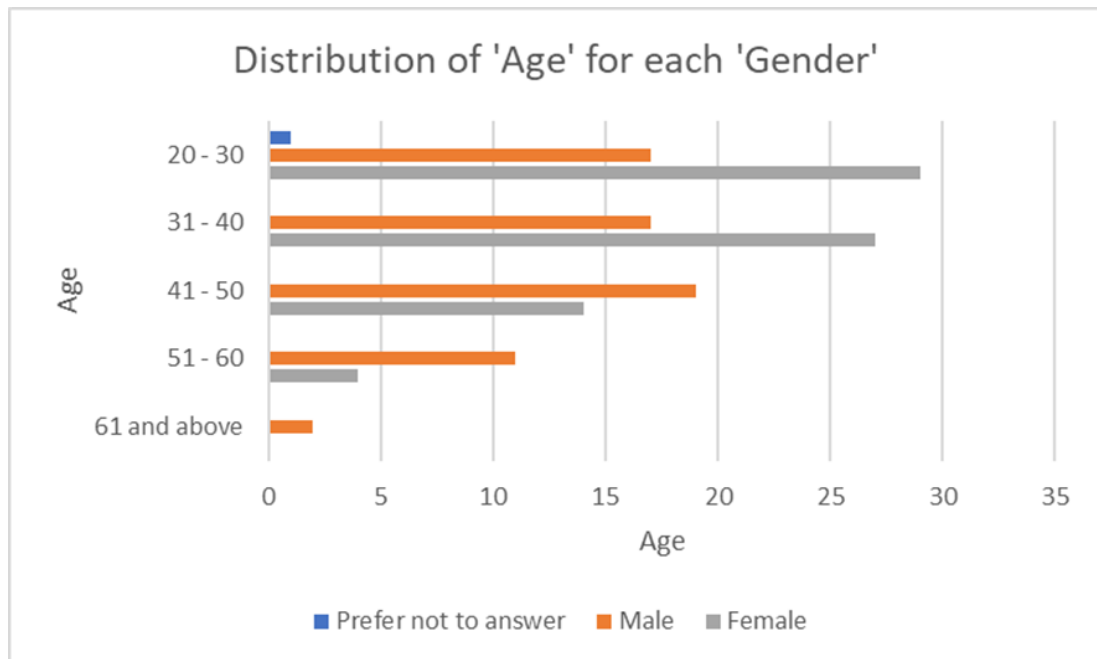


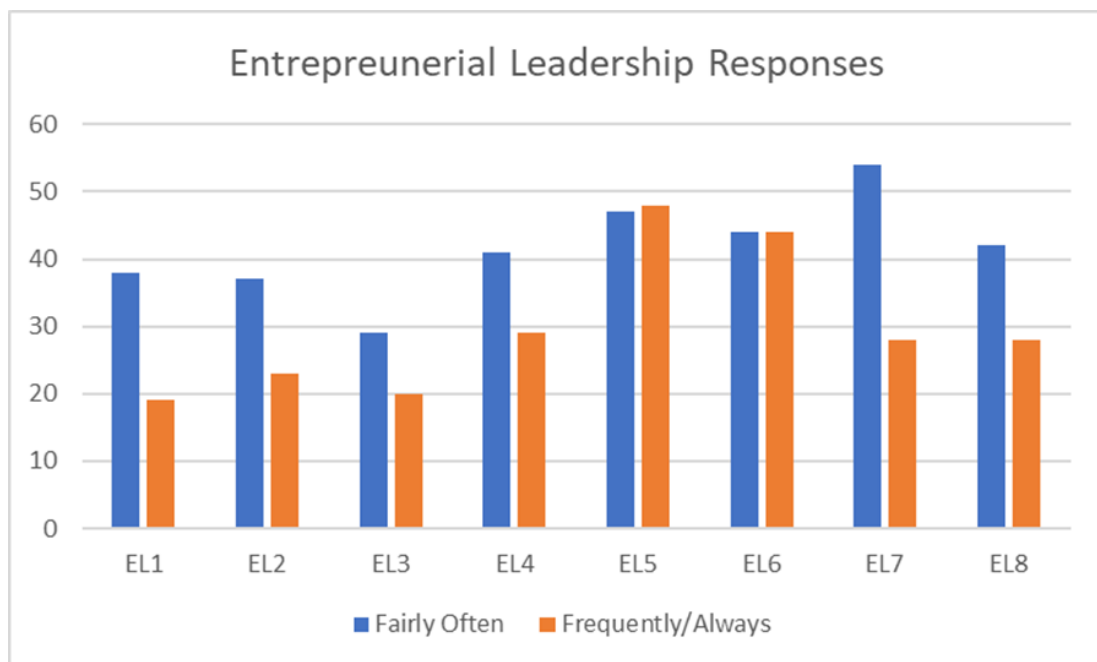
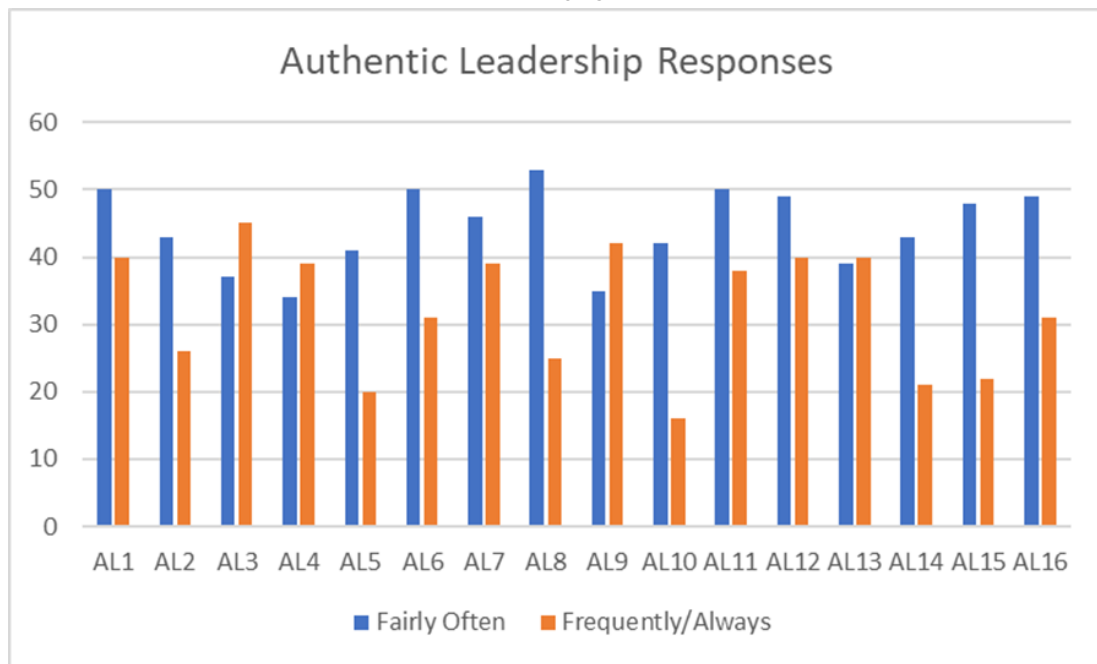
Note: AL1-16 denotes each of the authentic leadership items followed by EL1-8 represent the entrepreneurial leadership related items listed in the questionnaire.

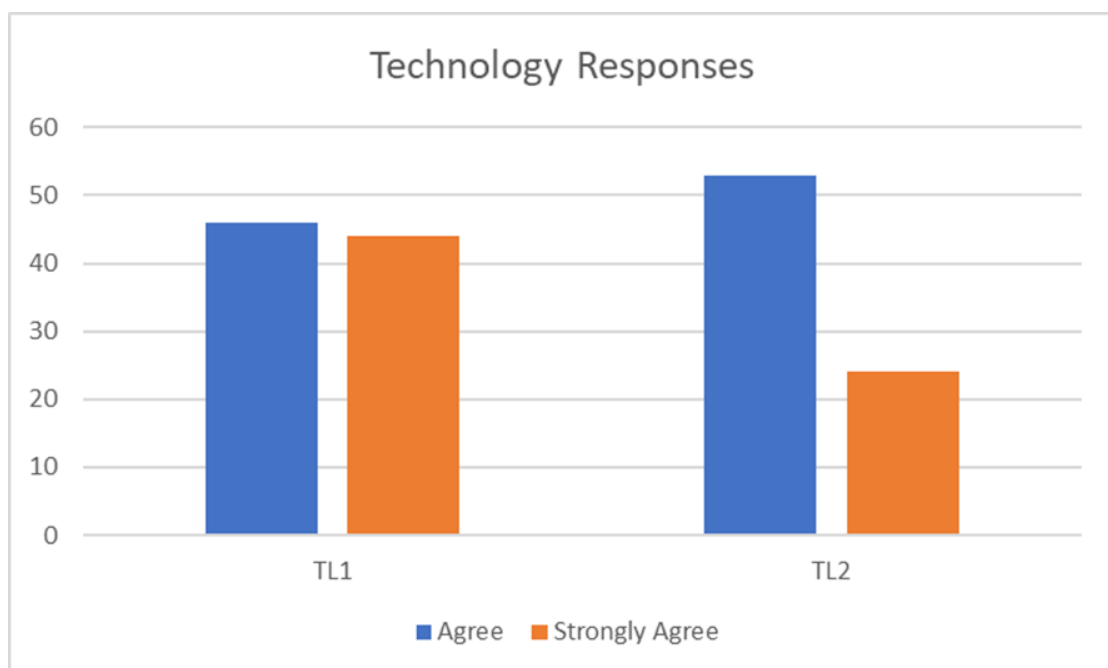
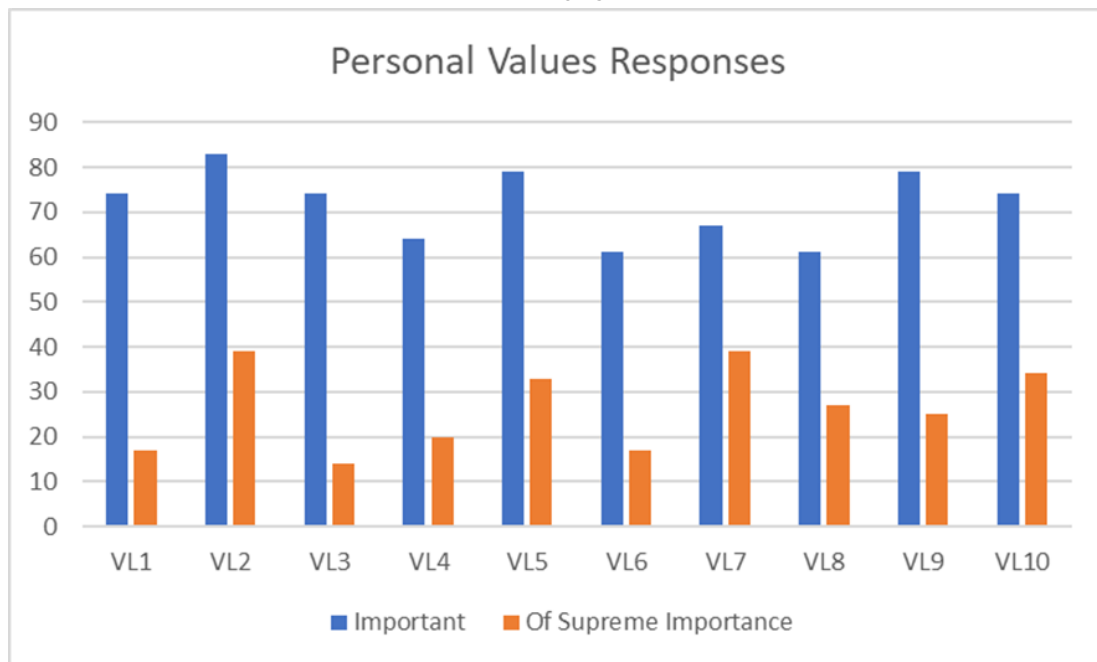


Note: VL1-10 denotes each of the personal value items followed by TL1-2 represent the technology related items listed in the questionnaire.

4. UK Followers Outcome







Malaysian Leaders

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Malaysian Followers

Appendix M: Supporting Outputs

UK and Malaysian Leaders Skewness & Kurtosis (SPSS)

Descriptive Statistics						Descriptive Statistics					
Statistic	N	Skewness		Kurtosis		Statistic	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error			Statistic	Std. Error	Statistic	Std. Error
Relational Transparency1	69	-1.051	.289	.609	.570	Relational Transparency1	67	-.963	.293	.814	.578
Relational Transparency2	69	-.964	.289	.374	.570	Relational Transparency2	67	-1.096	.293	1.898	.578
Relational Transparency3	69	-1.418	.289	2.664	.570	Relational Transparency3	67	-1.289	.293	1.857	.578
Relational Transparency4	69	-.303	.289	-.733	.570	Relational Transparency4	67	-.361	.293	-.877	.578
Relational Transparency5	69	-.208	.289	-.078	.570	Relational Transparency5	67	-.485	.293	-.077	.578
Moral and Ethics1	69	-.516	.289	-.004	.570	Moral and Ethics1	67	-.305	.293	-.703	.578
Moral and Ethics2	69	-.302	.289	-.746	.570	Moral and Ethics2	67	-.712	.293	-.093	.578
Moral and Ethics3	69	-.390	.289	-.027	.570	Moral and Ethics3	67	-.845	.293	.470	.578
Moral and Ethics4	69	-.625	.289	.236	.570	Moral and Ethics4	67	-.748	.293	.276	.578
Balanced Processing1	69	-.289	.289	-.901	.570	Balanced Processing1	67	-.446	.293	.173	.578
Balanced Processing2	69	-1.265	.289	1.526	.570	Balanced Processing2	67	-1.156	.293	-.008	.578
Balanced Processing3	69	-1.570	.289	2.080	.570	Balanced Processing3	67	-1.482	.293	1.796	.578
Self awareness1	69	-1.470	.289	1.406	.570	Self awareness1	67	-1.067	.293	.961	.578
Self awareness2	69	-.799	.289	.471	.570	Self awareness2	67	-.598	.293	.564	.578
Self awareness3	69	-.815	.289	.796	.570	Self awareness3	67	-.874	.293	.526	.578
Self awareness4	69	-.236	.289	-.830	.570	Self awareness4	67	-.700	.293	-.655	.578
Radical improvement ideas	69	-.397	.289	.057	.570	Radical improvement ideas	67	-.130	.293	-.534	.578
Ideas on new product/services	69	-.574	.289	-.490	.570	Ideas for new products/services	67	-.335	.293	-.657	.578
Take risks	69	-.306	.289	-.285	.570	Take risks	67	-.330	.293	-.405	.578
Creative solutions	69	-.474	.289	-.532	.570	Creative solutions	67	-.443	.293	-.404	.578
Passion for work	69	-.915	.289	-.010	.570	Passion for work	67	-.561	.293	-.670	.578
Vision for the business	69	-.652	.289	-.711	.570	Vision for the business	67	-.471	.293	-1.136	.578
Challenge and push staff to be innovative	69	-.290	.289	-.665	.570	Challenge and push staff to be innovative	67	-.500	.293	.683	.578
Challenge current way of doing business	69	-.525	.289	-.484	.570	Challenge current ways of doing business	67	-.865	.293	.309	.578
Power	69	-.597	.289	-.579	.570	Power	67	-.454	.293	1.594	.578
Achievement	69	.309	.289	.037	.570	Achievement	67	-.562	.293	-.728	.578
Hedonism	69	-.391	.289	.097	.570	Hedonism	67	-.743	.293	1.971	.578
Stimulation	69	-.806	.289	1.384	.570	Stimulation	67	.317	.293	-1.090	.578
Self-direction	69	-.925	.289	1.220	.570	Self-direction	67	-1.188	.293	2.955	.578
Universalism	69	-.697	.289	1.135	.570	Universalism	67	-.936	.293	2.030	.578
Benevolence	69	-.954	.289	1.108	.570	Benevolence	67	-.153	.293	-2.038	.578
Tradition	69	-.501	.289	-.062	.570	Tradition	67	-.727	.293	1.078	.578
Conformity	69	-.497	.289	-.461	.570	Conformity	67	-1.181	.293	2.304	.578
Security	69	-.795	.289	.731	.570	Security	67	-1.254	.293	2.610	.578
Valid N (listwise)	69					Valid N (listwise)	67				

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 Doctor of Philosophy, October 2025
 UK and Malaysian Followers Skewness & Kurtosis (SPSS)

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Relational Transparency1	141	-.624	.204	-.101	.406
Relational Transparency2	141	-.337	.204	-.864	.406
Relational Transparency3	141	-.634	.204	-.711	.406
Relational Transparency4	141	-.370	.204	-.909	.406
Relational Transparency5	141	-.298	.204	-.773	.406
Moral and Ethics1	141	-.622	.204	-.470	.406
Moral and Ethics2	141	-.688	.204	-.125	.406
Moral and Ethics3	141	-.612	.204	-.511	.406
Moral and Ethics4	141	-.498	.204	-.789	.406
Balanced Processing1	141	-.322	.204	-.723	.406
Balanced Processing2	141	-.709	.204	-.461	.406
Balanced Processing3	141	-.760	.204	-.417	.406
Self awareness1	141	-.555	.204	-.863	.406
Self awareness2	141	-.317	.204	-.832	.406
Self awareness3	141	-.387	.204	-.898	.406
Self awareness4	141	-.647	.204	-.511	.406
Radical improvement ideas	141	-.202	.204	-.726	.406
New product/services	141	-.167	.204	-1.130	.406
Takes risks	141	.018	.204	-1.004	.406
Creative solutions	141	-.328	.204	-1.010	.406
Passion for work	141	-.875	.204	-.196	.406
Vision for business	141	-.745	.204	-.395	.406
Challenges and push staff for innovation	141	-.727	.204	-.125	.406
Challenge ways of doing business	141	-.466	.204	-.673	.406
Power	141	-.242	.204	-.113	.406
Achievement	141	-.670	.204	.926	.406
Hedonism	141	-.357	.204	-.124	.406
Stimulation	141	-.229	.204	-.495	.406
Self-direction	141	-.631	.204	.406	.406
Universalism	141	-.126	.204	-.497	.406
Benevolence	141	-.505	.204	-.221	.406
Tradition	141	-.288	.204	-.631	.406
Conformity	141	-.420	.204	.133	.406
Security	141	-.491	.204	.018	.406
Valid N (listwise)	141				

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Relational Transparency1	72	-.250	.283	.231	.559
Relational Transparency2	72	-.278	.283	-.702	.559
Relational Transparency3	72	-.467	.283	-.510	.559
Relational Transparency4	72	-.309	.283	-.703	.559
Relational Transparency5	72	-.051	.283	-.526	.559
Moral and Ethics1	72	-.453	.283	-.076	.559
Moral and Ethics2	72	-.497	.283	-.163	.559
Moral and Ethics3	72	-.308	.283	-.721	.559
Moral and Ethics4	72	-.336	.283	-.491	.559
Balanced Processing1	72	-.131	.283	-.462	.559
Balanced Processing2	72	-.827	.283	-.233	.559
Balanced Processing3	72	-.562	.283	-.420	.559
Self awareness1	72	-.458	.283	-.680	.559
Self awareness2	72	-.546	.283	-.317	.559
Self awareness3	72	-.401	.283	-.435	.559
Self awareness4	72	-.407	.283	-.571	.559
Radical improvement ideas	72	-.336	.283	-.478	.559
New product/services	72	-.210	.283	-.524	.559
Takes risks	72	-.202	.283	-.827	.559
Creative solutions	72	-.394	.283	-.191	.559
Passion for work	72	-.721	.283	.029	.559
Vision for business	72	-.639	.283	-.212	.559
Challenges and push staff for innovation	72	-.392	.283	-.461	.559
Challenge ways of doing business	72	-.266	.283	-.908	.559
Power	72	-.342	.283	-.063	.559
Achievement	72	-.515	.283	1.559	.559
Hedonism	72	-.467	.283	.161	.559
Stimulation	72	-.456	.283	.272	.559
Self-direction	72	-.685	.283	1.625	.559
Universalism	72	-.453	.283	.072	.559
Benevolence	72	-.154	.283	-.464	.559
Tradition	72	-.348	.283	.096	.559
Conformity	72	-.310	.283	-.091	.559
Security	72	.161	.283	.249	.559
Valid N (listwise)	72				

UK, Malaysian Leaders and Followers Normality Test (SPSS)

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Relational Transparency1	.267	136	.000	.787	136	.000
Relational Transparency2	.245	136	.000	.818	136	.000
Relational Transparency3	.289	136	.000	.761	136	.000
Relational Transparency4	.196	136	.000	.864	136	.000
Relational Transparency5	.200	136	.000	.896	136	.000
Moral and Ethics1	.253	136	.000	.838	136	.000
Moral and Ethics2	.253	136	.000	.796	136	.000
Moral and Ethics3	.242	136	.000	.871	136	.000
Moral and Ethics4	.228	136	.000	.853	136	.000
Balanced Processing1	.181	136	.000	.893	136	.000
Balanced Processing2	.328	136	.000	.740	136	.000
Balanced Processing3	.351	136	.000	.692	136	.000
Self awareness1	.324	136	.000	.724	136	.000
Self awareness2	.260	136	.000	.858	136	.000
Self awareness3	.246	136	.000	.843	136	.000
Self awareness4	.269	136	.000	.781	136	.000
Radical improvement ideas	.237	136	.000	.870	136	.000
Ideas for new products/services	.234	136	.000	.881	136	.000
Take risks	.195	136	.000	.885	136	.000
Creative solutions	.256	136	.000	.859	136	.000
Passion for work	.281	136	.000	.785	136	.000
Vision for the business	.259	136	.000	.815	136	.000
Challenge and push staff to be innovative	.236	136	.000	.866	136	.000
Challenge current ways of doing business	.259	136	.000	.850	136	.000
Power	.349	136	.000	.783	136	.000
Achievement	.345	136	.000	.715	136	.000
Hedonism	.326	136	.000	.801	136	.000
Stimulation	.324	136	.000	.740	136	.000
Self-direction	.286	136	.000	.729	136	.000
Universalism	.318	136	.000	.774	136	.000
Benevolence	.324	136	.000	.712	136	.000
Tradition	.277	136	.000	.812	136	.000
Conformity	.271	136	.000	.810	136	.000
Security	.280	136	.000	.751	136	.000

a. Lilliefors Significance Correction

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Relational Transparency1	.202	213	.000	.878	213	.000
Relational Transparency2	.194	213	.000	.904	213	.000
Relational Transparency3	.208	213	.000	.864	213	.000
Relational Transparency4	.192	213	.000	.893	213	.000
Relational Transparency5	.176	213	.000	.909	213	.000
Moral and Ethics1	.221	213	.000	.889	213	.000
Moral and Ethics2	.228	213	.000	.878	213	.000
Moral and Ethics3	.220	213	.000	.884	213	.000
Moral and Ethics4	.173	213	.000	.883	213	.000
Balanced Processing1	.190	213	.000	.907	213	.000
Balanced Processing2	.235	213	.000	.852	213	.000
Balanced Processing3	.236	213	.000	.858	213	.000
Self awareness1	.222	213	.000	.873	213	.000
Self awareness2	.205	213	.000	.899	213	.000
Self awareness3	.210	213	.000	.897	213	.000
Self awareness4	.247	213	.000	.873	213	.000
Radical improvement ideas	.180	213	.000	.911	213	.000
New product/services	.195	213	.000	.904	213	.000
Takes risks	.154	213	.000	.912	213	.000
Creative solutions	.204	213	.000	.899	213	.000
Passion for work	.238	213	.000	.847	213	.000
Vision for business	.230	213	.000	.857	213	.000
Challenges and push staff for innovation	.213	213	.000	.876	213	.000
Challenge ways of doing business	.179	213	.000	.893	213	.000
Power	.294	213	.000	.841	213	.000
Achievement	.305	213	.000	.770	213	.000
Hedonism	.304	213	.000	.840	213	.000
Stimulation	.280	213	.000	.857	213	.000
Self-direction	.316	213	.000	.801	213	.000
Universalism	.268	213	.000	.863	213	.000
Benevolence	.271	213	.000	.825	213	.000
Tradition	.270	213	.000	.862	213	.000
Conformity	.299	213	.000	.827	213	.000
Security	.303	213	.000	.807	213	.000

a. Lilliefors Significance Correction

EFA UK and Malaysia Factor Rotations (Jamovi)

Factor Loadings					Factor Loadings				
	Factor			Uniqueness		Factor			Uniqueness
	1	2	3			1	2	3	
ALS_RT2	0.752			0.359	ALS_BP2	0.760			0.4087
ALS_RT3	0.780			0.299	ALS_BP3	0.852			0.2979
ALS_RT4			0.470	0.539	ALS_SA1	0.679			0.4085
ALS_RT5			0.477	0.655	ALS_SA3	0.748			0.4420
ALS_IM2			0.803	0.321	ALS_SA4	0.796			0.2574
ALS_IM3			0.500	0.649	VAL_PWR			0.493	0.7403
ALS_BP3	0.850			0.257	VAL_ACH			0.659	0.4506
ALS_SA3	0.765			0.388	VAL_STM			0.583	0.5971
ALS_SA4	0.585			0.447	VAL_TRD		0.532		0.4785
ELS_CB1		0.613		0.275	VAL_CFM		0.442		0.7679
ELS_CB2		0.818		0.270	VAL_SEC		0.969		0.0589
VAL_ACH		0.630		0.612	ELS_EO2	0.466			0.6955
VAL_BNV	0.560			0.563	ALS_RT2	0.424			0.6350
					ALS_RT3	0.470			0.6961

Note. 'Minimum residual' extraction method was used in combination with a 'oblimin' rotation

Note. 'Maximum likelihood' extraction method was used in combination with a 'oblimin' rotation

CFA UK and Malaysia Second Order Rotation (Jamovi)

Factor Loadings						Factor Loadings					
Factor	Indicator	Estimate	SE	Z	p	Factor	Indicator	Estimate	SE	Z	p
ALS_RT	RT2	0.763	0.1251	6.10	< .001	ALS_BP	BP2	0.604	0.1036	5.83	< .001
	RT5	0.690	0.1166	5.92	< .001		BP3	0.759	0.0939	8.08	< .001
ALS_IM	IM2	0.635	0.1024	6.20	< .001	ALS_SA	SA1	0.620	0.0926	6.69	< .001
	IM3	0.895	0.1204	7.43	< .001		SA3	0.910	0.1007	9.03	< .001
ALS_SA	SA3	0.920	0.1040	8.85	< .001		SA4	0.693	0.0927	7.48	< .001
	SA4	0.970	0.0938	10.34	< .001	ELS_EO	EO2	0.961	0.0813	11.83	< .001
ELS_CB	CB1	0.825	0.1029	8.02	< .001	VAL_CN	CFM	0.607	0.0885	6.86	< .001
	CB2	0.979	0.1097	8.92	< .001		TRD	0.509	0.0824	6.17	< .001
VAL_SE	ACH	0.649	0.0446	14.56	< .001	ALS_RT	RT2	0.891	0.1283	6.95	< .001
							RT3	0.793	0.1096	7.23	< .001
VAL_ST	BNV	0.799	0.0549	14.56	< .001	VAL_OC	STM	0.683	0.0577	11.83	< .001

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