

How Does Leadership Facilitate the University Enterprise's Sustainable Development?

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ABSTRACT: This study focuses on the influence of leadership and the university enterprise's sustainable development. and this study present the literature review in terms of the leadership and the university enterprise's sustainable development, followed by research methodology and research results and iscuSSION. However, the final part of this study is the conclusion and recommendation.

1. INTRODUCTION

Leadership is a crucial and vital management performance and function that can help to direct an organization or institute's resources in a bid to improve efficiency and the achievement of its goals. However, effective leaders provide clarity of purpose, and motivate and guide the organization and their subordinates to realize its mission and objectives. Regardless of the positions in an organization, government, company or institution, understanding the role of leadership can help the followers contribute more meaningfully to the accomplishment of the institution's vision and objectives. On the other hand, leadership, both in a research area and as a practical skill, encompasses the ability of an individual, group, or organization to "lead", influence, or guide other individuals, teams, or entire organizations.

In China, university enterprises have played an important and crucial role in university development and provided a brilliant platform for university students, academics, leadership and professionals for entrepreneurship and innovation activities. At the beginning of the reform and opening up in China, colleges and universities relied on their own advantages and embarked on the road of establishing enterprises in the form of university-run companies (Gao, 2018). The establishment of university-run enterprises has played an important role in raising education funds through multiple channels, improving school running conditions, promoting the transformation of scientific and technological innovation and achievements in universities (Gao, 2018), as well as innovating talent training models etc. However, it has gradually formed "star enterprises" run by the leading school-run industrial systems, such as Tsinghua University and Peking University in China. The original sources of assets of these enterprises were mainly assets allocated by university finance, and then they rapidly expanded and grew through various capital resources and operations (Gao, 2018). This study focuses on the influence of leadership and the university enterprise's sustainable development. Section 2 will present the literature review in terms of the leadership and the university enterprise's sustainable development, followed by research methodology and research results and discussion. However, the final part of this study is the conclusion and recommendation.

2. LITERATURE REVIEW

This section concentrates on the theory and literature review of the leadership and the university enterprise.

2.1 The leadership

According to Anderson Matthew (2017), leadership is defined as a process where leaders and followers work together to advance motivation and morale. The study of leadership in the digitalized world (Cortellazzo et al., 2019), identified categories according to and micro level of analysis (the role of C-level managers, leader's skills in the digital age, practices for leading virtual teams), as well as the macro level of analysis (e-leadership and organization, digital tools, ethical issues, and social movements). Main findings showed leaders were the key actors in the development of a digital culture: they need to create relationships with multiple and scattered stakeholders and focus on enabling collaborative processes in complex settings while attending to pressing ethical concerns (Cortellazzo et al., 2019).

However, Porter and McLaughlin in 2006, cited by Oc (2018), proposed seven components of the organizational context: culture/climate, goals/purposes, state/condition, processes, people/composition, structure, and time. In addition, Antonakis & Atwater (2017) discussed the possible antecedents of leader-follower distance, including organizational and task characteristics, national culture, and leader/follower implicit motives by means of the configuring theory to propose eight typologies, namely,

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proximal leadership, “Hands-off” leadership, virtually-close leadership, socially-distant leadership, virtually-distant leadership, avuncular leadership, manor house leadership and distal leadership.

Zakeer Ahmed Khan et al. (2016) pointed out the leadership styles, including transactional leadership style (contingent reward, management by exception and management by exception) and transformational leadership style (idealized influence, inspirational motivation, intellectual stimulation and individualized consideration). Meanwhile, Renko et al. (2015) discussed environmental, organizational, and follower-specific contingencies that may influenced the success of entrepreneurial leadership in the study. On the other hand, a list of attributes has emerged in this study that impacted the leadership: vision, planning, opportunity-focus, achievement orientation, influence (on both followers and on a larger constituency), motivating others, creativity (of the leader as well as followers), flexibility, persistence, patience, risk-taking, tenacity, high tolerance for ambiguity, self-confidence, proactiveness, power orientation, and internal locus of control.

2.2 The university enterprise

As an important part of the state-owned assets of universities, the university-owned enterprises affiliated with universities are of great significance in serving the discipline construction, talent training and transformation of scientific and technological innovation and achievements in Chinese universities (Su, 2024).

Marginson & Considine (2000) employed the example of 17 Australian higher education institutions from a three-year research study to demonstrate that the empirical core of The Enterprise University has been derived largely, which has covered about half of the Australian university enterprise system. On the other hand, through the bilateral survey, Tung et al. (2020) carried out among 819 students at five universities in Vietnam and the Philippines to estimate the determinants of the students' entrepreneurial intentions in those university universities by means of the Structural Equation Modelling. However, the theory of reasoned action, the theory of planned behaviour, the theory of entrepreneurial events and the model of entrepreneurial potential have also been employed in their research (Tung et al., 2020).

Meanwhile, Su (2024) illustrated the methods for improving the management of enterprises affiliated with universities, namely 1) to perfect the management mechanism of university-owned enterprises, 2) to improve the level of internal control of enterprises affiliated with the universities, 3) to strengthen the transformation of scientific and technological achievements and standardize the management of the novel enterprises, 4) to strengthen the construction of talent team, 5) to establish and improve incentive and restraint mechanisms, 6) to solve the problems of enterprises left behind by restructuring and, 7) to consummate the supervision and management system. Gao (2018) explained the dilemmas faced by the university-owned enterprises, namely 1) the function of the university and the university-owned enterprises is confused, and the enterprise's operation efficiency is low, 2) the lack of supervision and the frequent emergence of “problem companies” and, 3) The corporate governance structure is imperfect. On the other hand, Sheng et al. (2021) analyzed the main factors that need to be considered by enterprises affiliated with universities when choosing reform methods through the main factors and indicator system for selecting reform methods. Furthermore, these methods included operating conditions, degree of connection with teaching and scientific research, industry category and corporate property rights structure by means of a three-dimensional model constructed (Sheng et al., 2021). Meanwhile, an indicator system for selecting reform methods for enterprises affiliated with universities with 19 specific indicators has been shown in broad categories (Sheng et al., 2021).

3. RESEARCH METHODOLOGY

The research methodology employed in this study is the qualitative research method. Qualitative research is a type of research method that aims to gather and analyse non-numerical data in order to seek an in-depth understanding of social phenomena within the natural setting (Hennink et al., 2020). On the other hand, qualitative research (Hennink et al., 2020) is an approach and method that allows researchers to examine people's experiences in detail by means of employing specific sets of study methods, such as in-depth interviews, observation, content analysis, focus-group discussion, case study, life histories or biographies etc.

The qualitative research methods employed in this study are focus group discussion and case study. The detailed explanation should be demonstrated in the following section.

3.1 Case study

According to Van Wynsberghe & Khan (2007), the case study is a transdisciplinary and trans-paradigmatic heuristic research that involves the careful delineation of the phenomena for which evidence and data are being gathered (events, programs, concepts and processes etc.). Meanwhile, Yin defined a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Van Wynsberghe & Khan, 2007). Except for the wide range of case study definitions as discussed, it also refers to case study as a research method, study strategy, research design, or methodology etc. However, well-known examples of research techniques include participant observations, interviews, document analysis etc.

The Case Study employed in this study is a university-owned group, called

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Shandong Feixiang Software Industry Group (hereafter used as Group A), in Weifang District Municipality of Shandong Province of China. In 2013,

Weifang University of Science and Technology took the lead in establishing Group A, which is controlled by the university and has outstanding teachers, researchers, academics and leadership from the university as part-time technical directors and management team. However, it has formed an integrated development model of production, learning and research, and provided training and business opportunities for outstanding teachers, researchers, academics and leadership etc. It provides a platform for students' practical training, internship, employment, innovation and entrepreneurship etc. On the other hand, the establishment of Group A, the university-owned enterprise has attracted 1,002 social enterprises, companies or SMMEs (Small, Medium and Micro Enterprises) to join this platform. The establishment of Group A has integrated the resources of school-run enterprises, established a platform for the on-the-job training of university teachers, researchers, academics and leadership, as well as the practical training, internship, employment and entrepreneurship of students, and enhanced the development sustainability of dominant disciplines and majors in the scope of the university.

The companies under Group A have done a brilliant job and played an important and crucial role in the development of the university. For example,

1) Company A is the software engineering technology company of Shandong Province and a software enterprise supported by Shouguang Local Municipality. It is mainly engaged in software research and development, system integration, education and training, service outsourcing and other fields. It has successively undertaken and completed projects for government, education, enterprises, health etc. In addition, more than 500 software projects in public security, construction and other fields have been accomplished by Company A; 2) After years of development,

Company B has established a Jinan branch (Shandong Province in China), a Qingdao office (Shandong Province in China) and an American cooperative company (USA). The company has implemented more than 800 software projects, owns 36 software copyrights, and registered 12 software products; 3) Company C is an excellent-rate enterprise in the university's construction section. On the other hand, the excellent installation rate of the company's projects reached 100%, and the high-quality rate reached more than 80%. Among them, 5 projects won the "Taishan Cup" award, 5 projects won the "Yuandu Cup" award, 15 Weifang City high-quality projects, 27 demonstration projects for "Integrity and Customer Satisfaction" of Weifang

District Municipality, 4 main high-quality structural projects in Weifang City, 3 provincial-level safe and civilized construction sites, and 7 safety and civilized demonstration construction sites in Weifang District Municipality and; 4) Company D has been recognized as a national key cultural export enterprise by the Ministry of Commerce in China, the Chinese Ministry of Propaganda, the Chinese Ministry of Finance, the Chinese Ministry of Culture, the State Administration of Radio, Film and Television, and the General Administration of Press and Publication etc. It has successfully expanded into India, the United States, Australia, Canada, the Netherlands, France, KPO (Knowledge Process Outsourcing) and ITO (Information Technology Outsourcing) markets in more than a dozen countries including the UK, Ghana, and Pakistan, and has established longterm cooperative relationships with American Cypher Game Company, Norwegian PlayStay Game Company, American Ameida Digital Company, and Indian Thaad Animation and Game Company etc.

Company E is a book company that integrates traditional publishing and digital publishing. It was established in 2002 with a registered capital of 26 million yuan. The company currently has more than 320 employees. Among the book planning, editing and production staff, 85% had a college degree or above. It had 36 network professional and technical personnel, an editorial team of more than 200 experts and famous teachers, and an author team of more than 900 front-line outstanding teachers from prestigious universities across the country. The existing office area was more than 3,000 square meters, and the warehousing and logistics area was more than 10,000 square meters. The company jointly invested 150 million yuan to build the Dayi

Culture Media Building with a construction area of 30,000 square meters. On the other hand, company F with a registered capital of 52 million yuan, took advantage of the scientific research advantages of the vegetable seed industry of Weifang University of Science and Technology, integrated industry talents, germplasm resources, and market advantages, vigorously promoted independent research and development of vegetable varieties, and explored the extension of the service industry chain, promoting agricultural technology dissemination and technological poverty alleviation locally and nationally. The company had independently developed 32 varieties, 15 of which had completed new variety registration, covering tomatoes, cucumbers, melons, peppers, zucchini, watermelons and other varieties.

3.2 Focus-group discussion

Focus group discussion was frequently employed as a qualitative approach to obtain an in-depth understanding of social issues (Nyumba et al., 2018). However, the method aimed to gain data from a purposely selected group of individuals rather than from a statistically representative sample of a broader population. In addition, the focus group discussion method (advantages and limitations) can be used to suggest a better understanding for academics and researchers who would like to utilize a qualitative study in the field of social sciences (TÜMEN AKYILDIZ & AHMED, 2021).

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In this study, the focus-group discussion should be employed in a bid to enhance the credibility and reliability of the research results derived from the case studies. The participants of the focus-group interview should be CEOs, project managers, directors, marketing managers, experts, senior managers, academics who worked for the university-owned companies etc. However, the participants should be allocated into four groups, and every group has 4-5 participants according to the research requirement. In addition, the focus-group interview should have lasted for 1-2 hours under the leadership of the researcher with the assistance of the coordinator to record the process. However, the participants can withdraw at any time according to their condition and confidence.

3.3 Ethical clearance

Research ethics (Doody & Noonan, 2016 and Cecchini et al., 2018) is associated with forming the research topic and questions, choosing the appropriate research design, selecting the research methodology, gathering data via proper data collection methods, analysing data gathering and concluding the research findings in an ethical and responsible way. On the other hand, research ethics is an equilibrium between benefits and risks; furthermore, it is an equilibrium between the impartial selection of study populations and the guarantee of the rights of independent participants (Convery & Cox, 2012 and Cecchini et al., 2018).

The research questions and form of the research clearance have been submitted to the research clearance committee at the Weifang University of Science and Technology. The research committee was satisfied with the research and issued a letter for this valuable study.

Meanwhile, Doody and Noonan (2016) indicate that the researcher should be accountable for ensuring the confidentiality of participants and data collected in the study. However, confidential or individual information acquired from participants in the research must not be made public or available to anyone else without the permission of the participants (Doody & Noonan, 2016). On the other hand, privacy is an individual or personal right to judge when, how and to what extent individuals share their information with others (Qin, 2021). Furthermore, privacy is the right of a person to have some control over how personal information is gathered, utilised, and/or divulged (Qin, 2021).

4. RESEARCH RESULTS AND DISCUSSION

This section focuses on the research results derived from the case study and the focus group interview.

4.1 The case study research result and discussion

From the case study company A, showed that professional ability played an important and crucial role in the operation and development of the university-owned enterprises. For example, Zhang Lin is an excellent computer professional academic and researcher at this university. With his strong interest in computer teaching and software research and development, he joined Company A from the university and now serves as the technical director of Company A. As the company's business continues to mature, there are more and more customer orders and the scale is getting larger and larger. However, Zhang Lin has always been committed to teaching computer science and has won multiple teaching awards at the university as well. In the company, Zhang Lin worked hard to lead the technical team and successively won the title of "Technician with Outstanding Contribution in Shouguang City", "First Prize of Weifang City Scientific and Technological Innovation Achievements" and other individual and team honours.

However, leadership experiences are also very crucial for the development and growth of the university-owned enterprises in this study. The CEOs and directors from the Company A, B, C, D, E and F are all staff members of the university and they have done well as leaders in the university, so when they started this business under the university system, they were much easier to become successful and run the business well. On the other hand, as the leadership of the university, they have the convenience and benefit to get more support and resources via this university platform. This leadership ability is the resource coordination ability. Examples of these leadership universities include the CEO of Company A (Software and digital company), the CEO of Company B (Software and digital company), the Chairperson of

Company C (construction company), the CEO of Company D (digital company), the director of Company E (culture company) as well as the CEO of Company F (agriculture and seed company).

Meanwhile, the strategy capability is also one of the abilities of these leadership having. As we all know, one company can sustain itself for a long time which depends on the strategy capability of the entrepreneurs. The leadership of the university-owned company should decide the enterprise strategy which should lead this company in the right direction and get more profit in a bid to make this company become big and sustainable. Company A has subsidiaries in Beijing, Jinan (the capital city of Shandong Province in China) and the USA. This showed that this company has the ambitions to grow the company in a bid to make them competitively and invincibly. Company B also collaborated with the universities, governments and private sectors in order to get more orders and contracts in terms of the software market, education market as well as training skill market etc. They got 200 million Chinese yuan in 2022, so they grew their business, employed more brilliant staff and conducted more research and development. Nowadays, the seed is extremely significant for the country's agricultural development. However, this university is based in the agriculture centre in China, so Company F treated seed research and development as their priority and worked for the national strategy and task in a bid to produce advanced and productive vegetable seed for local municipal, provincial and national seed development. In 2023,

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their revenue was 50 million Chinese yuan and they became the top seed company in Shandong Province of China. In a nutshell, the strategy capability is exceptionally and extraordinarily important for university-owned enterprise development and sustainability in China.

In addition, the talent selection ability of the leader is extraordinarily pivotal and crucial for the long-term development of the university-owned enterprise. Wang Bo, Bu Caixia, and Sun Jing were all department managers of these companies. They all had a common identity: graduates of Weifang University of Science and Technology; they also all had a common experience: going to the company for practical training and internship while in the university, as well as after graduation. After strict competitive selection, they joined the different university-owned companies. After "studying hard and practising hard" and several years of grassroots learning and experience, they finally grew into an elite and became senior managers or directors in the companies.

Lastly, all the case studies showed that management skills also played a significant role in the development and advancement of the university-owned enterprise. All the leaders from these university-owned enterprises were deputy deans, directors, and brilliant staff before they opened this business. They owned the management skill priority to the business, which was the key factor why they could do business successfully. Company F always brought the study to the market for the internship, so they knew how to run this business, how to manage the staff, how to get the market, and how to see their product. The leadership of Company F conducted the seed research for a long time before they opened this seed company, so they had the management skills and experience via which they avoided the chance of failure.

4.2 The focus-group interview

The four focus-group interviews demonstrated that professional ability, leadership experience, strategy capability, resource coordination ability, talent selection ability, and management skill as well as talent selection ability are very significant for the development and advancement of the university-owned enterprise in this study.

However, the participants from the focus-group A mentioned that their professional ability, leadership experience, resource coordination ability and talent selection ability are extremely important for the university-owned enterprise sustainability. Focus group B preferred leadership experience, strategy capability, management skill and talent selection ability which were key factors for the company's development. On the other hand, the participants from focus group C concentrated on strategy capability, resource coordination ability, talent selection ability, and management skill as well as the talent selection ability. In addition, the focus-group D emphasized that all the factors were the determining elements for the survival and development of the university-owned enterprise.

5. CONCLUSION AND RECOMMENDATION

This study focuses on whether the leadership facilitate the university enterprise's sustainable development. In this research, the case study and focus-group interview were employed to determine the relationship between the leadership and the university-owned enterprise sustainable development. The research results showed that professional ability, leadership experience, strategy capability, resource coordination ability, talent selection ability, and management skill as well as talent selection ability are very significant for the development and advancement of the university-owned enterprise in China.

The potential theoretical significance is to formulate the factors of the leadership impacting the university-owned enterprise in China in a bid to make the researchers, academics and stakeholders focus on this valuable topic. On the other hand, the practical implication is to provide the socioeconomic significance and policy-making significance for the involvers and policy-makers of the university-owned enterprises in a bid to facilitate the sustainable development and operation of these companies in China.

REFERENCES

- 1) Anderson Matthew. (2017). Transformational Leadership in Education: A Review of Existing Literature. *International Social Science Review*, 93(1), 1–16. https://www.jstor.org/stable/90012919#metadata_info_tab_contents
- 2) Antonakis, J., & Atwater, L. (2017). Leader distance: A review and a proposed theory. *Oxford University Press*, 41(02), 1–60.
- 3) Cecchini, M., Bedini, R., Mosetti, D., Marino, S., & Stasi, S. (2018). Safety Knowledge and Changing Behavior in Agricultural Workers: an Assessment Model Applied in Central Italy. *Safety and Health at Work*, 9(2), 164–171. <https://doi.org/10.1016/j.shaw.2017.07.009>
- 4) Convery, I., & Cox, D. (2012). A Review of Research Ethics in Internet-Based Research. *Practitioner Research in Higher Education*, 6(1), 50–57
- 5) Cortellazzo, L., Bruni, E., & Zampieri, R. (2019). The role of leadership in a digitalized world: A review. *Frontiers in Psychology*, 10(AUG), 1–21. <https://doi.org/10.3389/fpsyg.2019.01938>
- 6) Doody, O., & Noonan, M. (2016). Nursing research ethics, guidance and application in practice. Owen Doody and Maria Noonan. *British Journal of Nursing*, 25(14), 803–807. https://ulir.ul.ie/bitstream/handle/10344/5187/Doody_2016_nursing.pdf?sequence=2

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- 7) Gao, L. (2018). Difficulties and Countermeasures Facing by the Enterprises in Universities. *Qiye Lingdao Moulve*, 03, 71–73. <https://doi.org/DOI:10.19299/j.cnki.42-1837/c.2018.05.028>
- 8) Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods*. Sage.
- 9) Marginson, S., & Considine, M. (2000). *The enterprise university: Power, governance and reinvention in Australia*. Cambridge University Press.
- 10) O. Nyumba, T., Wilson, K., Derrick, C. J., & Mukherjee, N. (2018). The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9(1), 20–32.
- 11) Oc, B. (2018). Contextual leadership: A systematic review of how contextual factors shape leadership and its outcomes. *The Leadership Quarterly*, 29(1), 218–235.
- 12) Qin, X. (2021). *Development of A Risk Reduction Model for After-sales Service on Chinese Agricultural Machinery in South Africa*. University of Pretoria.
- 13) Renko, M., El Tarabishy, A., Carsrud, A. L., & Brännback, M. (2015). Understanding and measuring entrepreneurial leadership style. *Journal of Small Business Management*, 53(1), 54–74. <https://doi.org/10.1111/jsbm.12086>
- 14) Sheng, S., Li, H., & Li, H. (2021). Research on reform methods of enterprises affiliated to universities. *Journal of China Three Gorges University(Humanities & Social Sciences)*, 43(05), 68–73. <https://doi.org/DOI: 10.13393/j. cnki. 1672-6219. 2021. 05. 013>
- 15) Su, J. (2024). Thoughts on the management of enterprises affiliated to universities. *Investment and Entrepreneurship*, 35(04), 151–153.
- TÜMEN AKYILDIZ, S., & AHMED, K. H. (2021). An Overview of Qualitative Research and Focus Group Discussion. *International Journal of Academic Research in Education*, 7(1), 1–15. <https://doi.org/10.17985/ijare.866762>
- 16) Tung, D. T., Hung, N. T., Phuong, N. T. C., Loan, N. T. T., & Chong, S. C. (2020). Enterprise development from students: The case of universities in Vietnam and the Philippines. *International Journal of Management Education*, 18(1), 100333. <https://doi.org/10.1016/j.ijme.2019.100333>
- 17) VanWynsberghe, R., & Khan, S. (2007). Redefining Case Study. *International Journal of Qualitative Methods*, 6(2), 80–94. <https://doi.org/10.1177/160940690700600208>
- 18) Zakeer Ahmed Khan, Allah Nawaz, & Irfanullah Khan. (2016). Leadership theories and styles: A Literature Review. *Journal of Resources Development and Management*, 16(January), 1–7.



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