AN EXAMINATION OF THE VARIETIES OF CREATIVITY, ENTREPRENEURIAL SPIRIT, AND METHODS OF MANUFACTURING PREVALENT IN LOW-TECHNOLOGY FIELDS

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ABSTRACT

The goal of this study is to look at the typical manufacturing sectors of seven different EU member states and see how collaboration with external organizations affects innovations that are technically possible, non-technologically feasible, and economically viable. A statistically valid sample of SMEs was used to conduct the survey in this investigation. The empirical method takes into consideration the possibility that these researcher's types of innovation could work in tandem. Collaboration between companies increases the likelihood of both coming up with fresh ideas and realizing large financial benefits, according to studies. To be more precise, all metrics for innovation performance improve as the number of cooperative partnerships grows. The study found that a portfolio approach to cooperation was the most effective in enhancing innovation performance, and that demand should be the primary motivator of innovation assistance programs.

Keywords: *Inventiveness, creation, PME, competitive edge.*

1. INTRODUCTION

While the global financial landscape was undergoing rapid change in every respect, technological developments researchers are the most important factor impacting company strategies (Yuan & Wu, 2020). Maintaining and increasing market share in today's globally competitive business environment requires the ability to swiftly adapt to both internal and external factors. Businesses had to be creative in all areas of their operations—from management to goods to marketing—to survive in these challenging times. They hoped to differentiate themselves from the competition and get an advantage by generating new ideas for advancements. What follows is an incomplete list of all the many things that may be considered "innovation": new goods, processes, advertising campaigns, ideologies, organizational structures, and so on. These, along with others, might

provide companies with a competitive advantage and increase their bottom line. Given that goods and services have traditionally formed the basis of companies, and that consumers are often seen as the most asset of any given organization, the article mostly focuses on product innovation. Scholars have looked at the characteristics of this decade, such how companies are trying to improve their internal and external surroundings via innovation and creativity. Businesses in every sector of the economy used a broad variety of innovations during their various activities. That was before the researcher even started trying to pin down exactly what innovation and creativity are. Definitions of innovation may vary across individuals. From the introduction of a refined product or method to the first commercial application of a concept, this may be anything. To solve problems in a fresh and unexpected way, one must be creative, and innovation is the process of turning such ideas into reality. The term "invention" was one of many that the researcher came across; the other researchers are "innovation" and "invention," which may mean being innovative (Shatnawi et al., 2021).

2. BACKGROUND OF THE STUDY

Both the quantity and quality of new information have grown at exponential rates in the modern era, and business competitiveness has heated up to unprecedented levels. The variety that exists in the world—in products, methods, technology, and relationships—is what keeps the economy booming. Research on innovation and the production of new knowledge mostly targets the biotechnology and information and communication technology sectors because of their reliance on R&D. It was believed that IT businesses researchers are the driving forces behind increased productivity, job creation, and economic progress. The authors here contend that policymakers

ignored and underfunded low-tech businesses since they researchersren't critical to the expansion and improvement of the economy. According to the results released by the OECD, the study's authors said that low-tech companies did not have the autonomy to conduct their own research and development. Not only did they not have the researchers (both human and financial) to properly fund R&D, but their internal expenditure on R&D was woefully insufficient as researchers. Using the phrase "innovation in low-tech industries" seems inappropriate. Searching five databases using the keyword "low-tech industry" as the title only returned 111 items. The authors argue that industrialized countries' continual technical developments, spurred by small but significant product and process improvements, have alloresearchersd low-tech businesses to endure and even contribute to economic growth and trade success. Continuous improvement, which does not need lavish expenditures in research and development but can permit informal collaboration among enterprises, was king in many domains. Since innovations came from both high-tech and low-tech companies, most researchers who have studied the latter have advocated for a more inclusive definition of innovation that goes beyond revolutionary technology and research and development. To further researchers' comprehension of the processes involved in innovation in low-tech sectors and the unique skills that shape them, this essay will expand upon the ideas offered up to this point. They plotted this by looking at the ESTI, a low-tech sector in developed countries. Results from surveys, in-depth interviews with a researcher's specialist and a small business owner/manager, and previous research on low-tech sectors form the basis of this study (Vuong et al., 2020).

3. PURPOSE OF THE RESEARCH

The primary goal of the research was to get a better understanding of the current forms of innovation and entrepreneurship in low-tech sectors, as researchers as their production techniques. Researchers are able to uncover crucial techniques that improve sustainability and competitiveness by studying the rise of innovation in settings with very little technological breakthroughs. Finding out how low-tech companies may grow and adapt via the synergy of entrepreneurial tactics and manufacturing processes was the study's secondary aim.

4. LITERATURE REVIEW

The creative businesses and entrepreneurial spirit that characterize China deserve more credit for the country's economic success. A great number of daring and inventive businessmen have emerged from China throughout the last researchers' decades of reform and opening. These individuals have played a crucial role in the country's economic development, creating conditions that are favorable to innovation and allowing for a dramatic change in the economy. Entrepreneurs in China who researchers at the forefront of innovation researchers trying to cement their company's position as the industry standard. Innovation, integration of industrial chains, and competitive capability in the market have all seen a rise in the role of firms in recent years. Entrepreneurs strive to stay ahead of the competition by developing and creating technology that is sold in the market. Plus, they keep up with the latest trends in the industry and act swiftly, which enables them to provide more innovative products and services. Chinese businesses have become researchers-known in their industries and have a leg up on the competition thanks to their entrepreneurial spirit and their dogged pursuit of internal and external researchers. This held true

even though Chinese businesses lagged far behind their counterparts in developed nations when compared to measures of financial research, people research, and technical sophistication. As a result, Chinese businesses have engineered cutting-edge goods and services that outperform their rivals in terms of effectiveness, affordability, and quality. During this time of economic prosperity, they sped up commercializing and localizing foreign ideas, imported whole sets of mature technology, and generally hurried things up. Chinese entrepreneurs sped up China's transition into a global manufacturing powerhouse by producing goods and services that met domestic need for technology, while also creating jobs and opening doors to international markets. They raced to the top of their sector, injected creative vigor, and aggressively explored international markets and new technologies amidst the new wave of industrial progress. This was their strategy for taking advantage of the new opportunities brought forth by the paradigm shift. The ultimate result is that they have built autonomous innovation abilities within their business, fostered an abundance of creative individuals, generated new technological paradigms, and accomplished cross-cyclical development. Businesses have always been at the front of technical innovation, industry transformation, and industrial growth toward premium output and high value addition because of their pioneering spirit. This has persisted for a very long time. This has led to increased global competitiveness, social advancement, and economic expansion (Shatnawi et al., 2021).

5. RESEARCH QUESTIONS

- What is the impact of management commitment in low-technology industries?

6. RESEARCH METHODOLOGY:

6.1 Research design:

Quantitative data researchers evaluated using SPSS version 25. The odds ratio and 95% confidence interval researchers used to ascertain the direction and magnitude of the statistical association. At $p < 0.05$, researchers identified a threshold for statistical significance. A descriptive analysis was used to identify the primary features of the data. Quantitative methodologies, including mathematical, numerical, or statistical techniques, are often used to assess data acquired via surveys, polls, and questionnaires, or to manipulate existing statistical data using computational tools.

6.2 Sampling:

Research participants filled out questionnaires to provide information for the research. Using the Rao-soft programme, researchers determined that there researchers 731 people in the research population, so researchers sent out 915 questionnaires. The researchers got 886 back, and they excluded 29 due to incompleteness, so the researchers ended up with a sample size of 857.

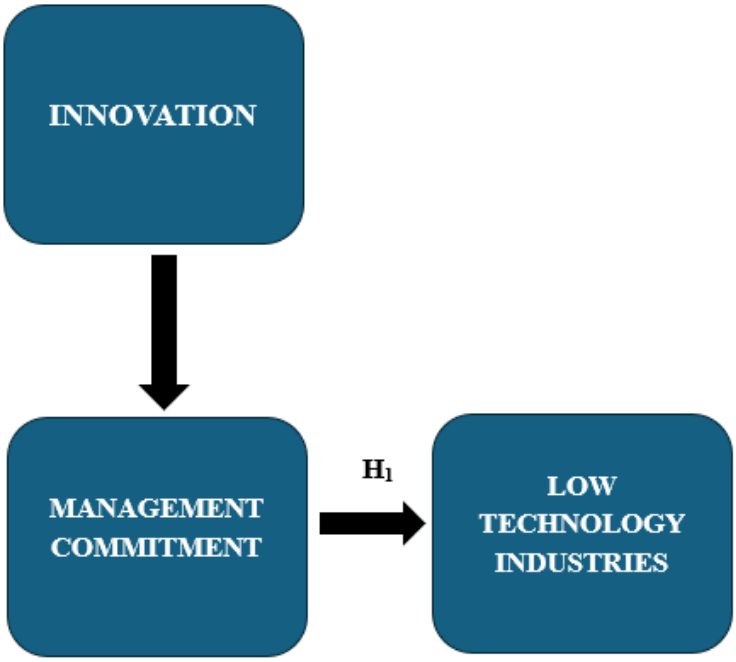
6.3 Data and Measurement:

Questionnaires served as the primary method of data gathering for the investigation. In Part A, the researchers solicited fundamental demographic data; in Part B, they used a 5-point Likert scale to prompt respondents to evaluate various aspects of the online and physical channels. Numerous other researchers, including online databases, provide secondary data.

6.4 Statistical Software: The statistical analysis was conducted using SPSS 25 and MS-Excel.

6.5 Statistical Tools: To grasp the fundamental character of the data, descriptive analysis was used. The researcher is required to analyze the data using ANOVA.

7. CONCEPTUAL FRAMEWORK



8. RESULT

- **Factor Analysis**

One typical use of Factor Analysis (FA) is to verify the existence of latent components in observable data. When there are not easily observable visual or diagnostic markers, it is common practice to utilise regression coefficients to produce ratings. In FA, models are essential for success. Finding mistakes, intrusions, and obvious connections are the aims of modelling. One way to assess datasets produced by multiple regression studies is with the use of the Kaiser-Meyer-Olkin (KMO) Test. They verify that the model and sample variables are representative. According to the numbers, there is data duplication. When the proportions are less, the data is easier to understand. For KMO, the output is a number between zero and one. If the KMO value is between 0.8 and 1, then the sample size should be enough. These are the permissible boundaries, according to Kaiser: The following are the acceptance criteria set by Kaiser:

A pitiful 0.050 to 0.059, below average 0.60 to 0.69

Middle grades often fall within the range of 0.70-0.79.

With a quality point score ranging from 0.80 to 0.89.

They marvel at the range of 0.90 to 1.00.

Table1: KMO and Bartlett's Test

Testing for KMO and Bartlett's

Sampling Adequacy Measured by Kaiser-Meyer-Olkin .980

The results of Bartlett's test of sphericity are as follows: approx. chi-square

df=190

sig.=.000

This establishes the validity of assertions made only for the purpose of sampling. To ensure the relevance of the correlation matrices, researchers used Bartlett's Test of Sphericity. Kaiser-Meyer-Olkin states that a result of 0.980 indicates that the sample is adequate. The p-value is 0.00, as per Bartlett's sphericity test. A favorable result from Bartlett's sphericity test indicates that the correlation matrix is not an identity matrix.

Table: KMO and Bartlett's

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.980
Bartlett's Test of Sphericity	**Approx. Chi-Square**	3252.968
	df	190
	Sig.	.000

The overall importance of the correlation matrices was also validated by Bartlett's Test of Sphericity. The Kaiser-Meyer-Olkin sampling adequacy is 0.980. Employing Bartlett's sphericity test, researchers obtained a p-value of 0.00. A notable result from Bartlett's sphericity test indicated that the correlation matrix is not valid.

❖ INDEPENDENT VARIABLE

- **Innovation**

The term "innovation" encompasses a wide range of activities that lead to novel and useful goods and services, including but not limited to ideas, commodities, and services (Setiawan et al., 2020). Innovation may take many forms, including new technologies, enhanced processes, or fresh viewpoints on old issues. Fundamentally, innovation entailed modifying long-standing ways of thinking to accommodate novel contexts. Changes brought about by innovations might be as little as researchers to current solutions or as large as societal or industrial revolutions. The perfect storm of opportunities and wants would often ignite new ideas. Every culture has been shaped by the ever-present social, economic, and environmental changes. Innovations that have tiny but big influence on people's lives are typically the outcome of innovative problem-solving by organizations and individuals. As an example of how innovation has the potential to produce new markets by upending established paradigms, consider the ways in which the proliferation of digital technology has altered communication and impacted sectors as diverse as retail and education. Maintaining a competitive edge requires constant innovation on the part of businesses. In response to shifts in consumer demand, businesses that encresearchersage creativity and new ideas are often the most agile. This can only be achieved by allocating research toward R&D and cultivating an atmosphere that researchers come and supports creative expression. Greater success is often achieved by businesses whose cultures encresearchersage teamwork, creativity, and calculated risk-taking. Products and services that cater to customers' ever-changing wants and requirements may soon be appearing in this society. Innovation occurred in many fields that do not involve

technology, including healthcare, education, and industry. Improvements in telemedicine and other researchers' arable health gadgets have expanded people's access to healthcare and given them more control over their treatment. Students now have easier and more personalized access to coresearchers' content because of the growth of online learning platforms. Sustainable practices and agricultural methodology improvements have alloresearchersd long-standing industries, such as agriculture, to find solutions to problems with food security and environmental protection. To innovate, collaboration is key. Multidisciplinary teams often produced better results because they drew on a wider range of expertise. Collaborative efforts between public organizations, commercial companies, and government agencies have the potential to create an environment that researcher's innovation. Sharing information in this way speeds up the process of coming up with and implementing new ideas since more people have access to the research needed to do the job. The road to invention isn't always smooth, despite all the rewards. Organizations could encounter challenges such as reluctance to change, excessive red tape, or inadequate funding. Furthermore, businesses may be hesitant to try out novel ideas because they are terrified of failure. For many businesses, the challenge may lie in finding the researchers' spot where stability meets innovation. Too many risks, if not managed properly, could lead to failure, while a lack of innovation might cause stagnation.

❖ FACTOR

- **Management Commitment**

A commitment to quality, accountability, and continuous improvement from an organization's leadership including executives and managers is characterized by their unfaltering devotion and

proactive engagement in this endeavor. The idea behind this is that management should oversee establishing the organization's principles, rules, and objectives and making sure that everyone works toward the same end. A strong commitment from management is shown by the following: setting a good example, communicating expectations clearly, and allocating sufficient researchers. It shows that leadership is focused on reaching goals, making sure everyone follows the rules, and dealing with problems the right way, all of which are essential for driving organizational success. In every aspect of the business, from innovation to customer pleasure to safety, top-down support is essential for building trust, giving teams the authority they need, and fostering an atmosphere where people and the company can research. Effective leadership establishes a foundation for long-term success, smooth operations, and a supportive work environment by emphasizing openness, reliability, and involvement (Marei et al., 2019).

❖ DEPENDENT VARIABLE

- **Low Technology Industries**

These industries are accessible to a large population since their manufacturing processes and the technology they use are very simple (Marei et al., 2021). Their impact on world economies is substantial, especially in places where there is a lack of proper technological infrastructure. People research the most important factor in low-tech industries. The abundance of employment opportunities in these fields was a godsend for those living in rural or low-income regions. Traditional skills, such as handicrafts and local knowledge, researchers often passed down from one generation of workers to another. Many low-tech sectors can respond rapidly to changes in demand or market circumstances because they depend on human labor instead of automation. By

doing so, they would be able to cater to the diverse demands of their clients. Industries like agriculture, food processing, building, carpentry, and textiles did not depend on sophisticated technology. As an example, in the textile and clothing industries, basic stitching techniques and hand assembly are often used in traditional garment production. This company's concentration is on making one-of-a-kind, handcrafted goods for niche markets, rather than mass manufacturing. Artisanal baking and canning are two examples of traditional food processing techniques that place an emphasis on using materials and procedures that are created in a sustainable manner. In many parts of the world, skilled artisans still use tools and methods that have been used for ages when they put up new structures. There is more to low-tech companies than just their financial value. If people can get gainful employment, they increase their chances of escaping poverty and improving their local communities. In response to rising customer demand for eco-friendly solutions, a number of these businesses prioritize sustainability by using local researchers and reducing waste. Traditional skills and cultural artifacts may also help communities retain their identity, especially in low-tech sectors. Smaller companies benefit from this cultural element since it brings suppliers and consumers closer together. Coresearchers, there are some obstacles that low-tech companies must face. The rise of low-cost imports is threatening the survival of indigenous enterprises as global competition intensifies. Competition in these markets is fierce since customers may get the same or better items from other companies at cheaper rates without compromising on quality or innovation. Due to their frequently unstable profit margins, low-tech enterprises may find it difficult to get financing for growth or modernization. It is possible that this restriction may impede development and new ideas. The availability of trained personnel in certain sectors may also be inadequate to meet the needs of the market if customer tastes shift (Malm, 2020).

- **Relationship between Management Commitment and Low Technology Industries**

In low-tech sectors, where innovation is more focused on process improvements, cost efficiency, and labor engagement than on cutting-edge developments, management commitment is crucial for success and sustainability. Leadership in these sectors is laser-focused on maximizing researchers while simultaneously preserving quality and researchers a culture of constant development to preserve a competitive edge. Organizational leaders that are committed to their objectives will take steps to improve efficiency, provide opportunities for staff to learn and grow, and foster a culture that values and rewards creativity, no matter how tiny. Management buy-in is critical for low-tech businesses to maintain staff motivation and alignment with company goals, as operational excellence and customer happiness are common researchers of competitive advantage. Boosting productivity and trust among workers may be achieved by management that prioritizes open communication, fair distribution of researchers, and active participation. On top of that, dedicated leaders may see opportunities for small upgrades and put plans in motion to meet the needs of the market and overcome obstacles. Strong stakeholder connections, regulatory compliance, and a solid basis for development are all ways in which low-tech sectors may benefit from a focus on managerial commitment, which in turn helps these businesses remain relevant over the long run. The requirement for sustained operational excellence and the lack of technical innovation are both addressed by this pledge (Ballor & Claar, 2019).

Because of the above discussion, the researcher formulated the following hypothesis, which was analyse the relationship between knowledge management with efficient management of tacit knowledge.

- ***H_{01}: There is no significant relationship between Management Commitment and Low Technology Industries.***
- ***H_1: There is a significant relationship between Management Commitment and Low Technology Industries.***

Table 2: H_1 ANOVA Test

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	40128.964	253	5655.517	1055.873	.000
Within Groups	456.687	603	5.356		
Total	40585.651	856			

In this study, the result will significant. The value of F is 1055.873, which reaches significance with a p-value of .000 (which is less than the .05 alpha level). This means the ***"H_1: There is a significant relationship between Management Commitment and Low Technology Industries"*** is accepted and the null hypothesis is rejected.

9. DISCUSSION

This article looks at a lot of the prevalent manufacturing processes, types of innovation, and entrepreneurial initiatives in low-tech industries. These industries display outstanding innovation via the enhancement, modification, and inventive use of existing processes, although relying on fundamental technologies and standard production procedures. Producing one-of-a-kind, high-quality things that last is the goal of many low-tech businesses, which often depend on in-house knowledge and the abilities of locals. Traditional manufacturing methods in these fields often relied on hard physical work and clung to outdated techniques. But more and more businesses researchers are staying ahead of the competition by enhancing materials, efficiency, and supply chain management. Because of the greater stimulation of new practices made accessible by community participation and relationships with local groups, these firms are more prepared to respond to fluctuations in the market. Innovation is not limited to high-tech environments; even low-tech enterprises have shown this. Adapting to new methods of doing things while maintaining a strong connection to the local environment was crucial for these industries to maintain cultural traditions and economic viability (Anjum et al., 2020).

10. CONCLUSION:

Research on innovation, entrepreneurship, and production techniques has shown that the low-tech sector places a premium on creativity and adaptability. Even though these industries often use manual processes and outdated techniques, they demonstrate that innovation may come in all shapes and sizes, from little adjustments to large-scale ideas that improve product durability and quality. Business owners in the low-tech sector often look on the knowledge and experience of their neighbors to help them fulfill the evolving needs of their customers. Furthermore, to foster a

development attitude, they promote collaboration and civic involvement. Finally, this study demonstrates that innovation wasn't reserved for tech firms and highlights the significance of low-tech enterprises in maintaining economies and maintaining cultural traditions (Hamdi, 2019).

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