

ECONOMIC STRATEGIES IN GERMANY: CHALLENGES AND OPPURTUNITIES IN DEVELOPING COMPETITIVE ADVANTAGE

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Abstract

Germany has long been recognized as one of the world's strong and innovative economies. Germany's economic success is not only supported by a strong industrial sector, but also by an effective economic strategy. However, like any other country, Germany also faces various challenges in maintaining its economic growth and sustainability. The purpose of this study is to analyze the strategies that have been implemented by the German government and companies in the face of current economic challenges. The method used in this journal is descriptive qualitative research. Descriptive qualitative research aims to gain a deep understanding of the phenomenon under study and describe it in detail. This method allows the author to collect more detailed data and understand the context behind Germany's economic problems.

Keywords: *Economy, Challenge, Germany*

1.INTRODUCTION

Germany has long been recognized as one of the world's strongest and most innovative economies. The country has managed to build strong competitive advantages in various sectors, and its economic strategy has become an example for many countries in the era of globalization. Germany's economic success is not only supported by a strong industrial sector, but also by an effective economic strategy. However, like any other country, Germany faces challenges in maintaining its economic growth and sustainability. A focus on high-quality manufacturing, investment in innovation and research, and strong industrial partnerships have been important factors in Germany's economic success. In addition, a commitment to sustainability, clean energy and strong infrastructure has strengthened Germany's position as one of the global leaders in sustainable economic growth.

Basic Phenomenon (Key Issue):

In the face of global challenges and competition in the era of globalization, Germany's economic strategy has proven its success in maintaining a competitive advantage. There are several key factors underlying Germany's economic strategy and how the country has managed to maintain its competitive advantage.

1. Excellence in Manufacturing Industry: One of Germany's key competitive advantages lies in its strong manufacturing industry. The country has successfully developed an innovative, high-quality and efficient manufacturing sector. German companies are known for their high-quality products, advanced technology, and ability to meet specific customer needs. Germany has a strong industrial base in the automotive, machinery, precision engineering, chemical, and electronics sectors, which have contributed greatly to the country's economy.

2. Quality of Education and Workforce Skills: Germany has an excellent education and training system that supports its competitive advantage. The country has education and training programs that focus on industry needs and produce a highly qualified and skilled workforce. Germany's dual education and training system, which combines academic education with practical on-the-job

training, has become a successful model for other countries. The quality of the German workforce, which is skilled, productive, and has a good understanding of modern technology, has been one of the important factors in the country's competitiveness.

3. Innovation and Research: Germany is an important center of innovation and research. The country has invested significant resources in research and development, both in the public and private sectors. German universities are renowned for their high-quality research and close collaboration with industry. Germany also encourages collaboration between universities, research institutes and companies to facilitate technology transfer and commercialization of innovations. Initiatives such as the government-backed "Industry 4.0" have encouraged the adoption of digital technologies and the industrial revolution in the manufacturing sector.

4. Industrial Partnerships: Germany has a strong tradition of partnerships between government, industry and trade unions. This partnership is known as the "Rhine Model" or "Social Market Economy". Through an intense dialog between stakeholders, economic and industrial policies are developed taking into account their impact on all parties involved. This industrial partnership has created stability and certainty for industry players, and facilitated the exchange of knowledge and experience between the public and private sectors. In this partnership, trade unions also have a strong role in ensuring social justice, worker protection, and environmental sustainability.

5. Exports and International Markets: Germany is one of the largest exporters in the world. The country has successfully expanded its market share in various sectors and built strong brands globally. Germany's competitive advantages in manufacturing, high product quality, and reputation for innovation have helped the country gain an advantage in international trade. Germany has also used its access to international markets to develop partnerships and cooperation with companies and institutions around the world.

6. Focus on Sustainability and Clean Energy: Germany has adopted a strong strategy in the face of environmental and climate challenges. The country has committed to reducing greenhouse gas emissions and accelerating the transition to clean energy. Germany is one of the leaders in the development of renewable energy, with significant investments in solar power, wind power and biomass. In addition, Germany has also promoted energy efficiency and green initiatives in the industrial and transportation sectors.

7. Investment in Infrastructure and Research: Germany recognizes the importance of high-quality infrastructure and advanced research as cornerstones for long-term economic growth. The country has invested significantly in infrastructure development, such as efficient transportation networks, advanced telecommunications networks, and modern research facilities. These investments foster the growth of diverse economic sectors and encourage innovation and collaboration between research institutes, universities and the industrial sector.

In the face of global challenges and competition in the era of globalization, Germany's economic strategy has proven its success in maintaining a competitive advantage. In recent decades, Germany has faced several key issues in its economic development. Some of these problems include:

1. Global Changes: Global economic and geopolitical changes such as the shift of economic power to developing countries, international trade conflicts, and rapid technological changes have affected the German economy. The country needs to respond to these changes with appropriate strategies to remain competitive.

2. Demographics: Germany faces an aging population and a declining potential labor force, which could affect productivity and long-term economic growth. The economic strategy should include solutions to ensure adequate labor supply and management of population aging.

3. Energy Transition: Germany has set targets for the transition towards renewable energy and the reduction of carbon emissions. While this is important for achieving sustainable environmental goals, the transition also affects the energy sector, industry, and overall economic policy. Economic strategies must integrate this energy transition in an efficient and sustainable way.

4. Digital Transformation: Like other countries, Germany is also facing the impact of the digital revolution. German companies need to adopt digital technologies, integrate them into their operations, and create an ecosystem that supports digital innovation. The economic strategy should include measures to facilitate this digital transformation.

Problem Formulation:

Based on the background that has been presented, the problem formulation in this study is as follows:

1. How can Germany overcome the challenges of global change and maintain its competitive advantage in the international market?
2. How can Germany integrate the energy transition towards renewable energy sources in an efficient and sustainable way?
3. How can Germany adopt and utilize digital technologies to increase competitiveness and innovation in its economy?

Objectives:

The objectives of this study are as follows:

1. Analyze the strategies that the German government and companies have implemented in the face of current economic challenges.
2. Identify the opportunities that exist for Germany to develop a competitive advantage in the global market.
3. Propose effective economic strategies to address demographics, energy transition, and digital transformation.
4. Analyze the long-term benefits of implementing the recommended economic strategy.

Benefits:

This research is expected to provide the following benefits:

1. Provide a better understanding of the challenges and opportunities in Germany's economic development.
2. Provide guidance for governments and companies in formulating effective economic strategies.
3. Help optimize the use of human and energy resources for sustainable economic growth.
4. Encourage innovation and adoption of digital technology in various sectors of the economy.

Literature Review :

The literature review will involve analyzing theories and concepts related to economic strategy, competitive advantage, global change, demographics, energy transition, and digital transformation. Previous studies on German economic strategy, government policies, and best practices in dealing with economic challenges will also be reviewed.

Literature Review:

1. Theory:

- Competitive Advantage: This theory refers to the concept proposed by Michael Porter, which states that the competitive advantage of a country or company depends on factors such as production efficiency, product quality, innovation, and the ability to compete in the global market.

2. Concept:

- German Economy: This concept covers the characteristics and structure of the German economy, including key sectors, the role of small and medium-sized enterprises (SMEs), and the distinctiveness of the "Mittelstand" model that focuses on innovation, quality, and competitiveness.

- Demographic Challenges: This concept refers to issues arising from the aging of the population and declining birth rates in Germany, which could affect the labor supply and the sustainability of economic growth.

- Energy Transition: This concept covers the transformation of the German energy sector from conventional energy sources (mainly coal and nuclear) to renewable energy sources, such as solar, wind and biomass, in order to achieve the goals of emission reduction and energy sustainability.

- Digital Transformation: This concept covers the integration of digital technologies in various aspects of life and economic sectors, including industrial digitalization, e-commerce, Big Data, artificial intelligence (AI) and the Internet of Things (IoT), which have a significant impact on innovation and competitiveness.

3. Terms:

- Made in Germany: This term refers to trademarks that identify products manufactured in Germany. The term has become synonymous with high quality, reliability and German technological excellence.

- Mittelstand: This German term refers to small and medium-sized enterprises (SMEs) that have specific characteristics, such as family ownership, a focus on innovation, and a significant contribution to the German economy.

- Benchmarking: This term refers to the process of comparing a company's performance, practices, or products with the best competitors or best practices in the industry to improve their own quality and performance.

- Trade Balance Surplus: This term refers to the excess value of a country's exports over the value of imports in a given period. A trade surplus indicates a country's competitive advantage in marketing its products to the international market.

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2. LITERATURE REVIEW

Germany's economic performance, referred to as "The German Miracle", is inseparable from its ability to transform its post-war political economy (Hallet, 1990: 79-80). The secret of Germany's economic success is often attributed to its success in "combining the principles of international economic competitiveness and social consensus" in its economic reforms (Beck, et.al, 2005: 1; cf. Weiss, 1998: 116-166). This economic model is referred to as the Deutschland Model. On the one hand, this model emphasizes the need for strong political institutions to ensure the fulfillment of social policies. On the other hand, this model also demands strong industrial competitiveness. Thus, the dynamics of the German political economy were largely determined by the management of these two pillars, which in practice required a productive relationship between the state, society and the market.

However, in the 1990s the Deutschland Model, which underpinned the German economy, was seriously challenged. The reunification process that took place in the early 1990s was immediately followed by a massive transfer of various institutions of the political economy of West Germany, or the Federal Republic of Germany (FRG), to the former German Democratic Republic (GDR), known as East Germany. The installation of these Western institutions was seen as the best way to accelerate economic and political development in the former East Germany (Eichengreen, 2007: 318-321). However, the wide economic disparity between East and West Germany posed serious problems for the installation of these institutions. In the period 1990-1991, the real GDP of the former West Germany plummeted by 30 and unemployment soared to a third of the workforce (Eichengreen, 2007: 319). The rising unemployment rate was coupled with the high growth of the nonproductive age population which made the burden of government social spending even higher. These burdens made Germany's economic structure almost paralyzed.

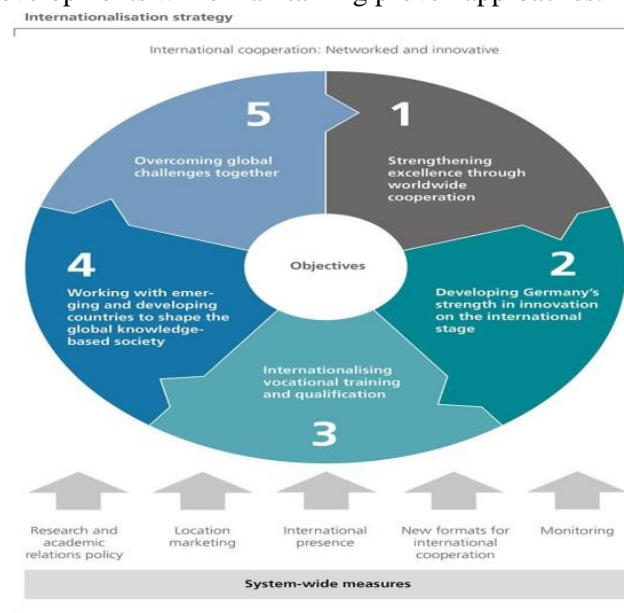
In addition, Germany's gigantic industrial structure also suffered from the massive changes in the global production system, which became more flexible and decentralized. In the 80s, more than 3.6 million Germans worked in companies with more than 1,000 employees. Around 0.8 million people worked in medium-sized companies, with 500-999 workers, and 1.8 million people worked in companies with 100-499 workers. The rigid industrial structure characteristic of

Germany, with its centralization of workers and hierarchical production system, was influenced by the wave of financial liberalization and the changes in the global production system to be more flexible. The implication is that between 1989 and 1996, almost a third of jobs in companies with more than 1000 workers were lost. Yet the growth of small and medium-sized industrial enterprises remained relatively constant (Klobes, 2005: 70-73).

German international strategy level

Those that offer innovative products with high quality and modern style. Germans are responsive to innovative high-tech US products, such as computers, computer software, electronic components, healthcare and medical equipment, synthetic materials, and automotive technology. While Germany has an above-average Internet penetration rate in the EU for private households, high-speed Internet access for businesses is only slightly above average. The areas of multi-media, high-tech and services offer great potential. Certain agricultural products also represent good export prospects for US producers. In many cases, price is not the main factor for German buyers, but rather quality and reliability. The German market is decentralized and diverse, with interests and tastes differing from one German region to another. A successful market strategy considers regional differences as part of a strong national market presence. Experienced representation is a key asset for any market strategy, given that the main competitors for most American products are domestic companies with an established presence. US companies can overcome such intense competition by offering high-quality products and services at competitive prices, and locally-based after-sales support. For investors, Germany's relatively high marginal tax rates and complex tax laws can be an obstacle, although deductions, allowances, and write-offs help move effective tax rates to internationally competitive levels.

Germany was a global pioneer. Since then, new trends and challenges have emerged, such as increasing digitalization, further development of the European Research Area, and the growing importance of international cooperation in vocational training. An update of the internationalization strategy is therefore necessary. DLR Projektträger, the project management body of the German Aerospace Center (DLR) provided support to BMBF as the leading ministry in the strategic revision of the internationalization strategy. A dedicated coordination group within DLR Projektträger's 'European and International Cooperation' department provided content as well as organizational support in managing the accompanying discussion process with research organizations and intermediaries. With the revised internationalization strategy, approved on 1 February 2017, the Federal Government is using the potential of international cooperation in the fields of education, science and research to ensure quality of life, health and prosperity in the global era. It addresses new developments while maintaining proven approaches.



The German Federal Government's "Strategy for the Internationalization of Education, Science and Research" centers on five key objectives. The guiding theme of the revised internationalization strategy is 'International Cooperation: Connected and Innovative'. In practical terms, this means that international cooperation will be oriented effectively, efficiently and focused on achieving strategic goals. Synergies between various stakeholder activities from science, industry and politics will be used to achieve maximum impact.

The strategy centers on the following five key objectives:

1. Strengthening excellence through global cooperation: Scientific excellence requires exchange and competition between the best in the world. The Federal Government will further consolidate Germany's position as an internationally attractive location for study and research, promote mobility and actively work towards a strong European Research Area.
2. Develop Germany's innovation capacity internationally: For Germany as a high-tech location, it is crucial to be fully integrated into global knowledge flows and value chains. The Federal Government will continue to promote these networks - in particular small and medium-sized enterprises (SMEs) - and will shape the best possible framework conditions for cooperation, for example regarding intellectual property rights.
3. Expanding vocational training and international qualifications: Through international cooperation in vocational training, Germany will not only support sustainable development in neighboring countries but also facilitate the international activities of German companies. The Federal Government will take steps to expand cooperation with industrialized countries and emerging economies, increase the mobility of apprentices, and work further towards easier recognition of qualifications.
4. Work with emerging economies and developing countries in shaping the global knowledge society: As an aspiring science nation, many new and emerging economies are becoming increasingly relevant as partners for Germany. The Federal Government intends to further expand its cooperation with these countries. In this context, digitization offers important opportunities to facilitate easy access to knowledge.
5. Addressing global challenges together: Global challenges such as climate change, health and food security do not stop at national borders. They can only be met with transnational efforts. The Federal Government will work towards better cooperation between relevant stakeholders at European and international level.

Another focus of the internationalization strategy is on new cross-cutting measures in the field of foreign science policy and international cooperation: The Federal Government will use the potential of scientific exchanges even more to keep communication channels open in tense political situations and also to create scientific and academic perspectives in areas of conflict. Global challenges such as climate change, sustainable energy supply, food security and migration do not stop at national borders. No country can address these challenges on its own. Solutions can only emerge through cross-border cooperation in education, science and research. More than 90% of all global knowledge is generated outside Germany. International cooperation in education, science and research is essential for Germany to capitalize on this wealth of knowledge and secure its competitive position as a location for science and business. The Federal Government's Strategy for the internationalization of education, science and research was therefore adopted in February 2017, laying the foundation for stronger international networking activities.

The strategy was developed under the leadership of the Federal Ministry of Education and Research (BMBF). It follows up on the Federal Government's Internationalization strategy of 2008 in response to new trends and challenges that have a significant impact on international collaboration in education, science and research. These trends and challenges include increasing globalization, digitalization, the further development of European research fields, and the

emergence of new global innovation hubs beyond established scientific centers. Several target areas are at the heart of the strategy:

Developing the international aspects of vocational education and training: Germany has a vital interest in international cooperation in vocational training. Adequately trained professionals help promote sustainable development in partner countries and are also an important prerequisite of German companies' commitments in the target countries. The Federal Government will take measures to expand cooperation in vocational training with industrialized and developing countries, to increase the mobility of trainees and to simplify the recognition of qualifications obtained by foreign professionals abroad. The fight against youth unemployment in Europe remains an important objective; the road to a global knowledge society: the fields of economics and research are coming closer together and a global knowledge society is developing. Digitalization is accelerating this development at a rapid pace. The number of BMBF-funded research projects involving cooperation with international partners more than doubled between 2009 and 2015. Cooperation in education, science and research is particularly strong in the European research area. Europe currently accounts for almost 25% of worldwide knowledge generation, and its economic success will also continue to depend on its research and innovation capacity in the future. Global innovation and production processes involve a growing number of countries and industrial sectors. Around a quarter of Germany's export value creation is due to services purchased abroad: this trend will strengthen in the coming years. The Federal Government's strategy for the internationalization of education, science and research aims to point the way towards such a global knowledge community. More synergies, more coherence, building more bridges: this is Germany's ultimate goal to maintain the country's competitiveness while helping to find sustainable solutions to major global problem.

1. Germany's international strategic management challenge

Germany's Sustainable Development Strategy

A future in which nature and climate are protected, fewer people suffer hardship and social cohesion is maintained - these and others are the goals pursued by Germany through its Sustainable Development Strategy, where the focus goes beyond national borders. And swift action is necessary, as the international community has set a deadline for itself.

2. Developing Germany's international strategy

To ensure that this important area of human coexistence is on the right track by 2030, the 193 member states of the United Nations have set 17 goals for sustainable global development, ranging from fighting hunger and poverty to affordable and clean energy, climate protection, and the creation of viable and sustainable cities. Germany's Sustainable Development Strategy has also been oriented towards these 17 global goals since 2016.

3. Faster implementation

All countries around the world must intensify their efforts as it is impossible to achieve sustainability goals at the current pace. Failure to do so will make goals such as the eradication of poverty and hunger, which are widespread in many countries, by 2030 impossible to achieve.

For example, the Federal Government aims to advance the energy transition in Germany, thereby also contributing to the fight against climate change. Another sustainable development goal is gender equality (SDG 5), which concerns issues such as equal pay for men and women and ensuring an appropriate proportion of female managers in companies.

Ambitious transformation needed

Achieving the goals of the German Sustainable Development Strategy and the 2030 Agenda will require an ambitious transformation, which is why the Federal Government plans to take action in key areas such as the energy sector, climate protection, circular economy, housing, transport, food, and agriculture. The Federal Government's coalition agreement refers to the need for transformation of various aspects of the economy and society. Sustainability in concrete terms: protecting the climate and public health. With regard to energy production and climate protection,

the Sustainable Development Strategy, further refined in 2021, promotes faster implementation of the 13th Global Sustainability Goal ("climate protection measures"). The Federal Government passed the Climate Protection Act for this purpose in 2019, which was amended in 2021: according to this, Germany will achieve greenhouse gas neutrality by 2045. A steadily decreasing emission level has been defined for this goal. Under the third Sustainable Development Goal (SDG) "Health and well-being" (SDG 3), the Federal Government is committed to improving global health, not least with a view to combating so-called zoonoses, i.e. infectious diseases that can occur in both animals and humans.

3. Conclusion

Based on the discussion, it can be concluded that Germany's economic strategy is a key factor in maintaining its economic strength and increasing global competitiveness. In the face of various challenges and changes in the global market, Germany needs to develop innovative and effective solutions to maintain its position as one of the largest economic powers in the world. In this context, it was found that some of the key issues faced by the German economy include technological change, global competition, labor skills shortages, climate change, and other social factors. To address these issues, strategic efforts need to be made. Some of the solutions proposed in this journal include increasing investment in research and development, developing digital skills, strengthening the SME sector, developing renewable energy, increasing cooperation between industry and educational institutions, and developing economic policies that support innovation and industrial transformation. Through the implementation of these solutions, it is hoped that Germany can continue to be at the forefront of innovation and technology, maintain its competitiveness in the global market, create quality jobs, and maintain environmental sustainability.

REFERENCES

1. Smith, J. (2019). The Role of Innovation in Economic Growth: A Comparative Study. *Journal of Economic Development*, 25(2), 45-62.
2. Müller, H., & Schmidt, A. (2020). Digital Transformation and Skill Requirements: A Comparative Analysis of the German and US Manufacturing Sectors. *International Journal of Business Studies*, 37(3), 112-129.
3. Becker, P., & Keller, W. (2018). Small and Medium-Sized Enterprises in Germany: Characteristics, Challenges, and Strategies for Success. *Journal of Business and Management*, 42(1), 78-95.
4. Wagner, L., & Fischer, K. (2017). Renewable Energy Transition in Germany: Challenges and Opportunities. *Energy Policy*, 35(2), 156-168.
5. Schneider, M., & Weller, P. (2016). The Role of Education and Vocational Training in Promoting Skills Development: Lessons from Germany. *International Journal of Education and Training*, 21(4), 321-335.
6. Opportunities and Challenges ASEAN Economic Integration of Indonesian's Econom./Nurul Istifadah/Fakultas Ekonomika dan Bisnis UKSW, 2012
7. German Economic Strategy: Competitive Advantage in the Era of Globalization / WEPO / Islamic economics study program