THE ROLE OF ACCOUNTING IN THE CONTEXT OF A CIRCULAR ECONOMY IN VIETNAM IN THE CURRENT PERIOD

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Abstract: ***In the context of globalization and sustainable development, the circular economy is emerging as an advanced economic model, promising to address the resource and environmental challenges that Vietnam is facing. The transition from the traditional linear economic model to a circular economy requires a comprehensive change in the way businesses operate and manage, in which accounting plays a crucial and indispensable role. Recognizing the strategic importance of accounting in promoting and supporting the circular economy model, this study conducts a multi-dimensional analysis of the role of accounting in the context of the circular economy in Vietnam. Based on a comprehensive analysis of roles and challenges, the study proposes solutions to promote the application of accounting in the context of the circular economy in Vietnam. Through this research, we not only gain a better understanding of the important role of accounting in the circular economy model but also have a basis for developing a specific roadmap to optimize the contribution of accounting in the transition to a sustainable and circular economy in Vietnam.***

• Keywords: *accounting, circular economy, businesses.*

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1. Introduction

Accounting and circular economy are two fields with significant intersections, especially in the context of globalization and sustainable development becoming top priorities for many countries and organizations. The circular economy is an economic model in which products, services, and processes are designed to optimize resource use and minimize waste, aiming to create a sustainable economic ecosystem. In this model, materials and products are reused, recycled, and recovered to extend their lifecycle, minimizing negative environmental impacts. The characteristics of the circular economy model encourage the circulation of resources and products, helping to reduce waste, optimize the use of natural resources, and minimize the depletion of non-renewable resources. This not only helps protect the environment but also creates new economic opportunities, promotes innovation, and enhances the competitiveness of businesses.

In Vietnam, the circular economy is gaining increasing attention and application across many industries. Many businesses have recognized the benefits of the circular economy and have begun to adopt sustainable business models. In the manufacturing and processing sector, many companies have started implementing recycling and material recovery processes to minimize waste and optimize resource use. In the service industry, businesses such as restaurants and hotels have begun applying energy-saving measures and waste-reduction techniques, thereby improving operational efficiency and minimizing environmental impact. In the construction industry, many companies have started using recycled materials and applying sustainable construction methods to reduce environmental impact and optimize costs.

In this context, accounting plays a crucial role in promoting and managing the circular economy through measuring, reporting, valuing, and managing costs and benefits. As financial and information supervisors, accountants can help businesses identify and assess opportunities and risks related to the circular economy. Accountants can assist businesses in tracking and reporting their environmental impacts, thereby making strategic decisions to minimize negative effects. They can also help value resources and products, manage costs and benefits, and develop sustainability indicators to measure the effectiveness of circular economy activities. However, implementing accounting in the circular economy also faces many challenges, requiring close cooperation between stakeholders to overcome and promote the development of this economic model.

2. Overview of the Circular Economy

The circular economy is an emerging economic model in recent years, aimed at replacing the traditional

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linear economic model of "extract - produce - consume - dispose". The circular economy model emphasizes efficient resource use, waste minimization, and maximizing product value throughout their lifecycle. This concept has attracted widespread attention from policymakers, businesses, and scholars globally as a potential solution to the environmental and resource challenges facing the world. There are various approaches and definitions of circular economy, depending on the perspective and focus of each organization or individual. However, most definitions emphasize redesigning production and consumption systems towards greater sustainability, optimizing resource use, and minimizing negative environmental impacts.

One of the most popular and comprehensive definitions of circular economy comes from the Ellen MacArthur Foundation, a non-profit organization leading the transition to a global circular economy. According to the Ellen MacArthur Foundation, a circular economy is an economic system designed to eliminate waste and maximize resource use. It is based on three fundamental principles: eliminating waste and pollution from the design stage; keeping products and materials in use; and regenerating natural systems. This definition emphasizes the importance of systems thinking and purposeful design in building a sustainable economy. The Organization for Economic Co-operation and Development (OECD) provides another perspective on the circular economy, defining it as an economic model aimed at maintaining the economic value of products, materials, and resources in the economy for as long as possible while minimizing the environmental impact of their use and disposal. This definition not only emphasizes value preservation but also focuses on minimizing environmental impact throughout the entire production and consumption cycle. The World Economic Forum (WEF) states that a circular economy is an industrial system that is restorative or regenerative by intention and design. It shifts towards the use of renewable energy, and eliminates the use of toxic chemicals that impair reuse and return to the biosphere through superior design of materials, products, systems, and business models.

Despite various approaches, definitions of circular economy also focus on some common points. First is the emphasis on maintaining the value of resources and materials in the economy for as long as possible. This requires changing how we design, produce, and use products, from a "use once and throw away" model to a "use - reuse - recycle" model. Second is the focus on minimizing waste and pollution, not only at the end of product life but from the design and production stages. Third is the regeneration of natural capital, recognizing that the economy is part of a larger ecosystem. Another important aspect in many definitions of circular economy is the emphasis on innovation and technology. Transitioning to a circular economy requires breakthroughs in product design, production processes, business models, and recovery systems. Digital technologies, artificial intelligence, and the Internet of Things (IoT) are seen as important tools to promote resource efficiency and create new business models based on circular principles.

Additionally, many definitions also address the social aspect of the circular economy. This model not only aims to protect the environment but also to create social value, including creating new jobs, improving working conditions, and enhancing quality of life. This reflects a more comprehensive approach to sustainable development, combining economic, environmental, and social goals.

Some scholars and organizations have expanded the definition of circular economy to include the concepts of "biological circularity" and "technical circularity". Biological circularity refers to the cycles of biodegradable materials, while technical circularity relates to the reuse and recycling of non-biodegradable materials. This approach emphasizes the need for different strategies for different types of materials, reflecting the complexity of modern production and consumption systems.

Some researchers have further expanded the definition of circular economy to include the energy aspect. They argue that a truly circular economy must be based entirely on renewable energy sources, eliminating dependence on fossil fuels. This definition closely connects the concept of circular economy with climate change and energy transition goals.

In summary, the definition of circular economy is a multidimensional and evolving concept, reflecting the complexity of environmental and economic challenges facing the world. Although there are many different approaches and emphases, most definitions share some common elements: optimizing resource use, minimizing waste, and regenerating natural capital. The diversity in these definitions reflects the flexibility and wide applicability of the circular economy concept in various contexts, from public policy to business strategy and academic research.

3. The role of accounting in the circular economy

Accounting plays an extremely important role in promoting and supporting the development of

the circular economy. In the context of increasingly urgent environmental and resource challenges, the circular economy model has emerged as a promising solution to achieve sustainable development. Unlike the traditional linear economic model following the "extract - produce - consume - dispose" chain, the circular economy aims to maximize resource use, minimize waste, and regenerate natural systems. In this model, resources are used more efficiently through recycling, reuse, and regeneration, creating a closed loop between production and consumption. To successfully transition to a circular economy, the participation and contribution of many stakeholders are needed, in which accounting plays a key role.

First, accounting provides important financial information to measure and manage the effectiveness of circular economic activities. Accounting experts can collect, analyze, and present data on resource use, waste management, and recycling processes in businesses. By establishing appropriate tracking and reporting systems, accounting helps organizations have a clear view of their resource efficiency, thereby identifying opportunities for improvement and optimization. For example, accounting can track costs related to waste collection and treatment, material recycling costs, as well as revenue from selling recycled products. This information helps leadership make informed decisions about investing in new technologies and processes to improve resource efficiency.

Moreover, accounting plays a role in developing and applying new valuation and assessment methods that align with the principles of a circular economy. Traditional accounting methods often do not fully account for the environmental and social impacts of business activities. In a circular economy, new approaches are needed to assess the true value of assets, including the environmental and social benefits they bring. For example, accounting can develop methods to quantify and report on the value of conserving natural resources, reducing greenhouse gas emissions, or improving working conditions for employees. This requires creativity and innovation in accounting approaches but will provide a more comprehensive view of business performance in the context of the circular economy.

Accounting also supports the formulation of new policies and regulations related to the circular economy. With expertise in financial systems and reporting, accounting professionals can contribute to developing new standards and guidelines for measuring and reporting on circular economy performance. They can advise regulatory bodies on how to design tax policies and financial incentives to encourage businesses to adopt circular economy principles. For example, accounting can propose carbon tax mechanisms or incentive programs for investing in green and clean technologies. These contributions help create a favorable legal and policy environment for the development of the circular economy.

Another role that accounting can play is integrating circular economy principles into business strategy and operations. By providing detailed financial information and analysis, accounting helps leadership better understand the opportunities and risks associated with transitioning to a circular business model. They can assess the feasibility of investment projects in recycling technology, analyze the cost-benefits of adopting sustainable production processes, and forecast the long-term financial impact of circular economy initiatives. This information is an important basis for businesses to make strategic decisions and allocate resources effectively towards sustainable development goals.

In addition, accounting also holds a key role in enhancing the transparency and accountability of organizations in the circular economy. Through the development and application of new reporting standards, accounting helps businesses disclose full and accurate information about their resource efficiency, environmental impact, and social contributions. This not only helps stakeholders such as investors, customers, and communities have a clearer view of the business's operations but also creates motivation for organizations to continuously improve their performance. For example, accounting can develop new key performance indicators (KPIs) to measure the degree of circularity in resource use, waste recycling rates, or carbon emission reductions. This information can be integrated into financial and non-financial reports, creating a comprehensive picture of the business's contribution to the circular economy.

Accounting is also essential in managing risks and opportunities related to the circular economy. In the context of increasingly stringent environmental regulations and growing consumer demand for sustainable products and services, businesses face many new risks. Accounting can help identify, assess, and manage these risks through financial analysis and forecasting. At the same time, they can also help businesses recognize and take advantage of new business opportunities arising from circular economy trends, such as developing new products from recycled materials or providing waste management consulting services. By providing detailed information and in-

depth analysis, accounting helps businesses make wise strategic decisions in the context of transitioning to a circular economy.

In addition, the role of accounting in the circular economy is also reflected in supporting decision-making processes and policy planning at the macro level. By providing data and analysis on resource efficiency, and environmental and economic impacts of production and consumption activities, accounting helps policymakers have a basis for making important decisions. For example, accounting can contribute to developing new economic indicators to measure a nation's sustainable development, such as the Green GDP or the Genuine Progress Indicator. These indicators not only take into account economic growth but also consider factors such as environmental degradation, resource depletion, and social welfare. By providing a more comprehensive picture of economic performance, accounting helps guide national policies toward sustainable and circular development.

Moreover, accounting plays a role in developing and applying new financial instruments to promote the circular economy. This includes designing green financial products such as green bonds, sustainable investment funds, or financing mechanisms based on environmental performance. Accounting can help define evaluation criteria and monitor, and report on the effectiveness of these financial instruments, ensuring transparency and reliability for investors and stakeholders. For example, in the case of green bonds, accounting can develop methods to measure and report on the environmental impact of funded projects, helping investors assess the real effectiveness of their investments in promoting sustainable development.

Accounting also supports efforts in managing and reporting on natural capital, an aspect that is increasingly emphasized in the circular economy. Natural capital includes natural resources and ecosystem services that businesses and society depend on. In the context of increasing awareness of the value of natural capital, accounting needs to develop new methods to assess, recognize, and report on the use and conservation of natural capital. This may include developing natural capital accounting frameworks, calculating hidden environmental costs, or assessing the impact of business activities on biodiversity. By integrating these factors into accounting and reporting systems, businesses can better understand their dependence on nature and make more sustainable business decisions.

The role of accounting in the circular economy is also reflected in promoting corporate social responsibility (CSR) and responsible investment. Accounting can help businesses identify, measure, and report on CSR activities related to the circular economy, such as waste reduction initiatives, recycling programs, or sustainable community development projects. By providing transparent and reliable information about these activities, accounting helps businesses build reputation, enhance stakeholder trust, and attract investment from responsible investors. Moreover, accounting also plays an important role in evaluating and reporting on environmental, social, and governance (ESG) factors - criteria that are increasingly valued in investment decisions.

In summary, the role of accounting in the circular economy is incredibly diverse and significant. From providing critical financial and non-financial information, developing new measurement and reporting methods, supporting decision-making and policy planning, to fostering innovation and creativity in the financial and accounting fields, the accounting profession plays a pivotal role in driving the transition to a sustainable and circular economic model. To address these challenges and opportunities, accounting professionals must continuously update their knowledge, develop new skills and adapt to changes in the business environment. By doing so, the accounting profession not only contributes to the advancement of the circular economy but also enhances its role and value in society.

4. Implication to promote accounting applications in the circular economy context

To effectively implement accounting practices in the circular economy, a comprehensive and synchronized set of solutions is required from various stakeholders, including regulatory agencies, professional organizations, businesses, and educational institutions.

One of the primary solutions is the development and standardization of new accounting frameworks aligned with the principles of the circular economy. This requires close collaboration among international accounting standards organizations, regulatory agencies, and experts in the circular economy to establish new guidelines and standards. These frameworks must be flexible and comprehensive, capable of capturing and reporting not only traditional financial transactions but also resource flows, environmental impacts, and social values generated by circular economic activities. For instance, new methods can be developed to record and evaluate the value of assets designed for reuse or recycling, as well as innovative ways to allocate costs and benefits in circular business models such as "product-as-a-service."

Alongside developing new accounting frameworks, investing in advanced technology and information

systems is also crucial for implementing accounting in the circular economy. Technologies such as the Internet of Things (IoT), blockchain, and artificial intelligence (AI) can be applied to automate the collection, processing, and analysis of data on resource flows and environmental impacts. For example, IoT sensors can track real-time resource usage and waste generation, while blockchain can ensure transparency and traceability of materials in circular supply chains. AI and machine learning can analyze patterns and trends in data, helping to predict resource demand and optimize recycling processes. Integrating these technologies into accounting systems will provide more accurate, timely, and comprehensive information for decision-making in the context of the circular economy.

Another important solution is the development of new valuation and assessment methods for assets and resources in the circular economy. This requires a combination of traditional accounting methods with environmental and social assessment techniques. For example, the "life-cycle costing" method can be applied to calculate the total cost of an asset throughout its lifecycle, including production, operation, maintenance, and recycling costs. Additionally, natural capital valuation and ecosystem service assessment methods can be integrated into accounting systems to fully reflect the value of natural resources and environmental impacts. Developing and standardizing these methods will provide a more comprehensive view of business performance in the context of the circular economy.

To effectively implement these solutions, training and capacity-building for accounting professionals are essential. Educational institutions and professional organizations need to update training programs to incorporate new knowledge and skills related to the circular economy. This includes adding courses on environmental accounting, product lifecycle analysis, sustainable supply chain management, and data analytics. Furthermore, continuous training programs and professional certifications in accounting for the circular economy should be developed to help current professionals update their knowledge and skills. Businesses can also play a critical role by investing in internal training and encouraging employees to participate in relevant courses.

Finally, to ensure the effectiveness and sustainability of these solutions, supportive policies and regulations are necessary. Regulatory agencies could consider enacting new requirements for businesses to report on their circular performance or providing financial incentives for adopting circular accounting practices. Additionally, developing national reporting guidelines and standards for the circular economy will create a favorable environment for implementing new accounting solutions.

In conclusion, applying accounting practices to the circular economy requires a comprehensive and multidimensional approach, including the development of new accounting frameworks, investment in technology, workforce training, fostering collaboration and information sharing, developing new performance indicators, and supportive policies. By synchronously implementing these solutions, the accounting profession can play a significant role in driving the transition to the circular economy, contributing to sustainable development and efficient resource utilization on a global scale.

5. Conclusion

The circular economy is a sustainable and necessary economic model to minimize negative impacts on the environment and optimize resource use. Accounting plays an important role in promoting and managing the circular economy through measuring, reporting, valuing, and managing costs and benefits. In Vietnam, the circular economy is gaining increasing attention and application in many industries, bringing benefits to both businesses and the environment. However, the implementation of the circular economy also faces many challenges, requiring close cooperation between stakeholders to overcome difficulties and challenges and promote the development of this economic model.

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