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Open Innovation for sustainable development goals: Evidence from GoTo Group

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Abstract

This research aims to describe and provide experiences related to developing open innovation in digital business models to support sustainable development goals (SDGs). The research method is a literature study with a content analysis approach. First, we conducted a literature search on Google scholar and analyzed it using a descriptive-analytical method: data reduction, data presentation, and concluding. Furthermore, the conclusions from the literature review are used for assessing the GoTo Group business model. Our study finds that the GoTo Group implementation framework for sustainable development goals exists in three pillars - GoGreener, GoForward, and go together.

Keywords: Open innovation; business model; multi-sided platform; Gojek; Tokopedia; GoTo Group; SDGs

Introduction

Open innovation has been widely debated in the management of innovation literature over the past few decades (H. W. Chesbrough, 2006; Gassmann & Enkel, 2004; West & Gallagher, 2006). On the one hand, research has identified several advantages of the open innovation model, such as leveraging external knowledge inputs to accelerate internal innovations and expand the markets for external invention use. On the other hand, empirical evidence indicates that the returns from open innovation decrease at the margin as the costs of openness exceed the benefits (Laursen & Salter, 2006). Studies highlight considerable heterogeneity in open innovation performance among companies, indicating that companies vary considerably in their ability to master the challenges associated with openness (Salge, etc., 2012). Perhaps due to a lack of systematic evidence on inter-company heterogeneity in open innovation performance, little is known about the factors that help distinguish organizations capable of reaping the benefits of open innovation from those less skilled (Huizingh, 2011). But many factors may account for such heterogeneity, such as product complexity (Almirall & Casadesus-Masanell, 2010), research capability (Laursen & Salter, 2006), and industry membership (Grimpe & Sofka, 2009).

However, recent studies reveal that companies that have successfully capitalized on integrating external sources of knowledge into their innovation processes stand out in organizational terms: They are characterized by organizational flexibility and a willingness to restructure their existing business models to accommodate open innovation strategies (H. W. Chesbrough, 2006; H. Chesbrough & Schwartz, 2007). We define business models as the content, structure, and governance of transactions inside and between the company and its external partners to support the company's creation, delivery, and capture of value (Santos, etc., 2009; Zott & Amit, 2010). As business models reflect the strategic choices of the company (Magretta, 2002; Zott & Amit, 2010), the option of open innovation requires that the company defines those ways to create, deliver and capture value in conjunction with external partners that are consistent with open

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innovation. In support of this overall proposition, empirical evidence strongly suggests that organizational design, practices, and capabilities need to be aligned with open innovation strategies to positively influence the sourcing of knowledge from external parties and its subsequent exploitation for innovation (Jansen et al., 2005; Keinz et al., 2012; Salge et al., 2012). These findings indicate that companies wishing to engage in open innovation must or at least partly re-organize their business models to accommodate their open innovation strategies and enhance innovative performance.

Furthermore, a few studies explicitly link open innovation strategies to business models. That is, while such methods differ significantly with the number and types of actors involved (Elmquist et al., 2009; Laursen & Salter, 2006); and the phases of the innovation process that are kept open in terms of interacting with outside knowledge sources (Foss et al., 2015). One example of open innovation in the business model is the multi-sided platform (MSP). The phenomenon of "platformization" has considerable implications for international marketing, and MSPs have changed how firms operate across. Moreover, the nature of exchange in retail connects suppliers with consumers from around the world within one giant ecosystem. Thus, it facilitates product interaction and sale through MSPs (Hänninen, etc., 2018).

Ferreira & Teixeira (2019) apply Schmookler's demand-pull innovation model to explore how external impetuses and internal knowledge resources influence innovation development in the Hungarian agri-food industry. They show that tacit knowledge is more prominent than explicit one, and the use of tacit internal understanding is relevant in the innovative production process. Furthermore, they find that R&D spending negatively influences innovation's success among the 302 food SMEs. Empirical evidence shows that companies implementing open innovation require several available networking capabilities; absorption capacity, multiplication capacity, and relational capacity with suppliers, customers, competitors, and others (Perkmann & Walsh, 2007).

Peñarroya-Farell & Miralles (2021) conducts research on Business Model Dynamics from Interaction with Open Innovation; their study aims to provide a related understanding of business model dynamics (BMD) and business model adaptation (BMA) and business model innovation (BMI). Peñarroya-Farell & Miralles said that the business model dynamics are fundamental to be applied, and changes in the business model will affect the success of the business strategy implementation. Pichlak & Szromek (2021) researches Environmental Innovation, Sustainability, and Business Model Innovation by Open Innovation Dynamics. This study shows that adopting an open innovation strategy reinforces the propensity to generate environmental innovations, especially radical ones. In addition, this research also says that business model innovation with dynamic open innovation is significant because it contributes to sustainable development goals. The phenomenon of platformization has considerable implications for international marketing, changed the way firms operate across borders, and the nature of exchange in retail, connecting suppliers with consumers from around the world within one large ecosystem and thus facilitating interaction and sale of products (Nambisan et al., 2019). However, Peñarroya-Farell & Miralles (2021) and Pichlak & Szromek (2021) only focus on the open innovation factor in dynamic business models. They do not discuss the Sustainable Development Goals aspects.

Tokopedia and Gojek are companies that are currently switching to open innovation through a multi-sided platform. In 2021, both entities officially announced the merger formation of the GoTo Group, the largest technology group in Indonesia and the mainstay of the community's ecosystem by providing various solutions. The collaboration was carried out to make it easier for the public to make transactions online. In addition, the MSP business model on GoTo will significantly support the goal of sustainable development to achieve prosperity for MSMEs. We want to express the importance of implementing the MSP business model to support and contribute to the SDGs. This article contributes to the literature and practice research on the MSP business model, offering a clear and rigorous definition of each term from a strategy point of view. In addition, this research also contributes to providing an understanding of the contribution of the open innovation of the MSP business model to support the government in sustainable development goals. The open innovation in the MSP business model studied in this study is the business model run by the GoTo Group company, which the researcher chose as the research object. Therefore, the purpose of this article is to: 1) identify open innovation in the GoTo Group; 2) identify open innovation with the MSP business model on the GoTo Group; 3) identify the contributions of open innovation with the MSP business model on the GoTo Group in supporting sustainable development goals (SDGs).

Literature Review

Open Innovation

An influential and expanding stream of literature in innovation research argues that companies can no longer rely on the traditional closed innovation model in the face of increasing global competition, rising R&D costs, and shortening product life cycles. Thus, increasingly they depend on accessing external

sources of knowledge and collaborating with individuals, companies, and other organizations that possess relevant knowledge that may be deployed in the context of the company's innovation process (Chesbrough, 2002).

Collaborating with external knowledge partners has, to a large extent, been enabled by recent trends in information and network technologies that have led to decreased costs of knowledge dissemination, communication, and coordination costs which make it easier for companies to find and access distributed knowledge from all over the world (Lakhani et al., 2012)—recognizing the fact that the appropriate expertise required to solve innovation problems is both widely distributed and sticky leads many companies to adopt an open innovation model (Afuah & Tucci, 2012). Since Chesbrough (2002), many studies have clarified the concept further. Table 1 provides an overview of definitions of open innovation.

Table 1. Definitions and indicator of open innovation

Author	Definition	Indicator
Chesbrough, (2006: 1)	Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. [This paradigm] assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology	✓ Collaboration between organizations
Gassmann & Enkel, (2004: 2)	Open innovation means that the company needs to open up its solid boundaries to let valuable knowledge flow in from the outside to create opportunities for cooperative innovation processes with partners, customers, and suppliers. It also includes the exploitation of ideas and IP to bring them to market faster than competitors	✓ Technology acquisition ✓ External R&D (Fadhilah & S, 2018)
Dittrich & Duysters, (2007: 512)	The system is referred to as open because the boundaries of the product development funnel are permeable. Other parties initiate some ideas from innovation projects before entering the internal funnel; other projects leave the funnel and are further developed by other parties	
Perkmann & Walsh, (2007: 259)	Innovation can be regarded as resulting from distributed inter-organizational networks, rather than from single firms	
West & Gallagher, (2006: 320)	Open innovation as systematically encouraging and exploring a wide range of internal and external sources for innovation opportunities, consciously integrating that exploration with firm capabilities and resources, and broadly exploiting those opportunities through multiple channels	
Terwiesch & Xu, (2008: 1529)	A rapidly growing number of innovation processes rely on the outside world to create opportunities and then select the best from among these alternatives for further development. This approach is often referred to as open innovation.	

Business Model

Though widely used in management research and practitioners, the business model construct lacks clarity. The construct was introduced in the late 1950s but hardly used in publications until the 1990s, and it was only with the hype of the Internet and the emergence of e-businesses that it caught on about a decade ago or so (Osterwalder et al., 2005; Zott et al., 2011). Since then, the business model construct has been used to denote different things, such as parts of a business model (e.g., auction model), types of business models (e.g., direct-to-customer model), concrete real-world instances of business models (e.g., the Dell model) or concepts (elements and relationships of a model) (Osterwalder et al., 2005). This conceptual ambiguity is reflected in the variety of business model definitions in extant literature. Table 2. shows that actual definitions indeed vary. Some reports specify the interplay between business actors, value creation, and revenue sources (Timmers, 1988); others relate to innovations and how to generate revenues from them (Chesbrough & Rosenbloom, 2002), while others again start from the theoretical essence of business models, that is, the minimum set of core components that must be common to all business models and which set the business model to construct apart from other constructs (Amit & Zott, 2001; Osterwalder et al., 2005).

Osterwalder (2005) tries to explain a simple framework to present the essential elements of a business model, namely the business model canvas (see Fig 1). Based on the different possible

configurations of these business model elements, companies can design other business models to reflect their overall strategy choices. Examples of well-known business model "themes" include the "no-frills" model often found in the airline industry (e.g., Ryanair) or Apple or Nespresso's "customer lock-in" business model. With the adoption of open innovation practices, "open business models" have emerged as a new design theme (Chesbrough, 2006). Although business model experts have a common understanding, business models must be aligned with the company's overall (innovation) strategy (Zott & Amit, 2010). Their existing business models accommodate open innovation practices. In particular, a company can adopt different (available) innovation strategies for its other business units.

Table 2. Definitions and indicator of business model

Author	Definitions	Indicator
Timmers, (1988:4)	an architecture for the product, service and information flows, including the various business actors and a description of the sources of revenues.	<i>n.a</i>
Mahadevan, (2000: 59)	a unique blend of three streams that are critical to the business. These include the value stream for the business partners and the buyers, the revenue stream, and the logistical stream.	<i>n.a</i>
Linder & Cantrell, (2000: 1)	the organization's core logic for creating value. The business model for a profit-oriented enterprise explains how it makes money.	<i>n.a</i>
Amit & Zott, (2001: 4)	A business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities.	<ol style="list-style-type: none"> 1. Content of transactions 2. Structure of transactions 3. Governance of transactions 4. Value creation design
Bock & Wiener, (2017)	The way we make money.	<i>n.a</i>
Chesbrough & Rosenbloom, (2002: 532)	The business model provides a coherent framework that takes technological characteristics and potentials as inputs, and converts them through customers and markets into economic inputs. The business model is thus conceived as a focusing device that mediates between technology development and economic value creation.	<ol style="list-style-type: none"> 1. Value proposition 2. Market segment 3. Structure of value chain 4. Cost structure and profit potential 5. Position within value network 6. Competitive strategy
Magretta, (2002: 4)	The business model tells a logical story explaining who your customers are, what they value, and how you will make money in providing them that value.	<ol style="list-style-type: none"> 1. Customer definition 2. Value to customer 3. Revenue logic 4. Economic logic
Osterwalder et al., (2005: 17)	A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams.	<ol style="list-style-type: none"> 1. Value proposition 2. Target customer 3. Distribution channel 4. Relationship 5. Value configuration 6. Core competency 7. Partner network 8. Cost structure 9. Revenue model
Shafer et al., (2005: 202)	Business is fundamentally concerned with creating value and capturing returns from that value, and a model is simply a representation of reality. We define a business model as a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network.	<ol style="list-style-type: none"> 1. Strategic choices (customer, value proposition, capabilities, pricing, competitors, offering, strategy) 2. Create value (resources/assets, processes/activities) 3. Capture value (cost, financial aspects, profit) 4. Value network

Tikkanen et al., (2005: 792)	We define the business model of a firm as a system manifested in the components and related material and cognitive aspects. Key components of the business model include the company's network of relationships, operations embodied in the company's business processes and resource base, and the finance and accounting concepts of the company.	<ol style="list-style-type: none"> 1. Material aspects: strategy and structure, network, operations, finance and accounting 2. Belief system: reputational rankings, industry recipe, boundary beliefs, products
Voelpel et al., (2005: 261–262)	The particular business concept (or way of doing business) as reflected by the business's core value proposition(s) for customers; its configured value network(s) to provide that value, consisting of own strategic capabilities as well as other (e.g. outsourced/allianced) value networks and capabilities; and its leadership and governance enabling capabilities to continually sustain and reinvent itself and satisfy the multiple objectives of its various stakeholders (including shareholders).	<ol style="list-style-type: none"> 1. Customer value propositions 2. Value network configuration 3. Sustainable returns for stakeholders
Chesbrough, (2007: 12)	The business model performs two important functions: value creation and value capture. First, it defines a series of activities, from procuring raw materials to satisfying the final consumer, which will yield a new product or service in such a way that there is net value created throughout the various activities. Second, a business model captures value from a portion of those activities for the firm developing and operating it.	<ol style="list-style-type: none"> 1. Value proposition 2. Target market 3. Value chain 4. Revenue mechanism 5. Value network or ecosystem 6. Competitive strategy
Johnson et al., (2008: 52)	A business model consists of four interlocking elements (customer value proposition, profit formula, key resources, key processes) that taken together create and deliver value.	<ol style="list-style-type: none"> 1. Customer value proposition (target customer, job to be done, offering) 2. Profit formula (revenue model, cost structure, margin model, resource velocity) 3. Key resources 4. Key processes (metrics, rules and norms)
Zott & Amit 2010: 219)	We have defined the business model as depicting the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities.	<ol style="list-style-type: none"> 1. Structure of transactions 2. Content of transactions 3. Governance of transactions
Santos et al., (2009: 11)	A business model is a configuration of activities and of the organizational units that perform those activities both within and outside the firm designed to create value in the production (and delivery) of a specific product/market set.	<ol style="list-style-type: none"> 1. A set of elemental activities 2. A set of organizational units performing the activities 3. A set of linkages between the activities 4. A set of governance mechanisms for controlling the organizational units and the linkages between the units

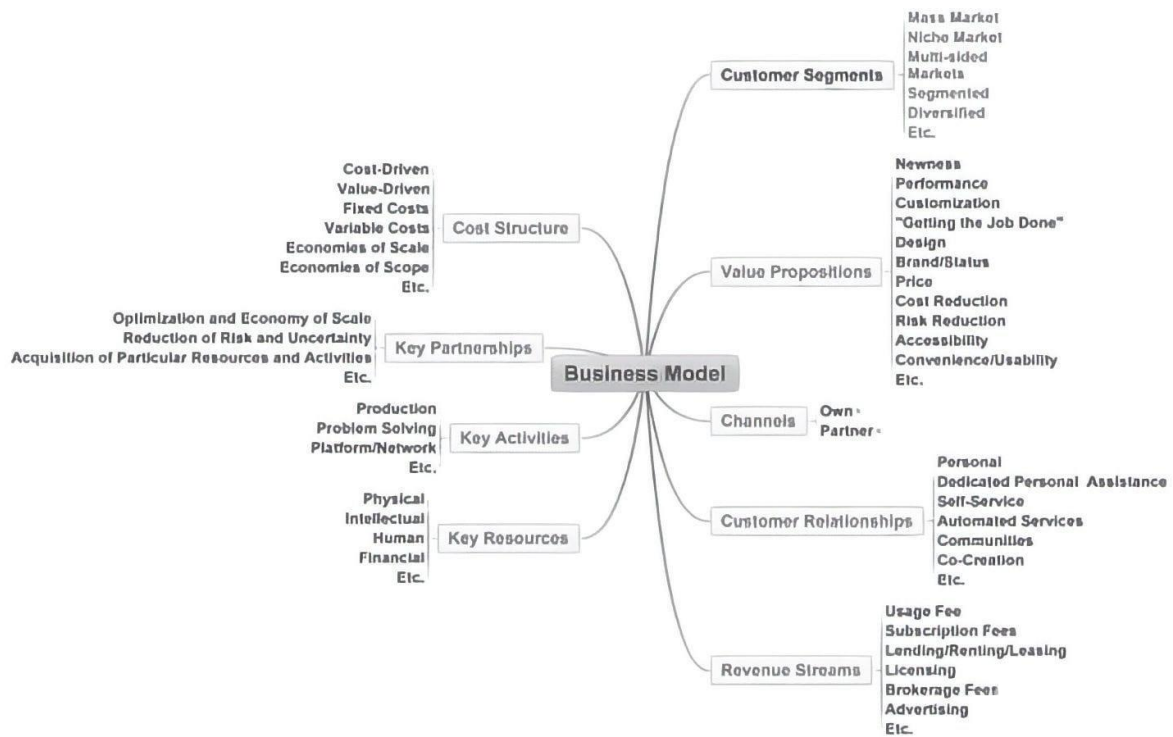


Figure 1. Business Model

Table 3. Definitions and indicator of multi-sided platform (MSP)

Author	Definition	Indicator
Øverby & Audestad, (2021)	Multi-sided platform also known as the "two-sided" model, a multi-sided platform is a business model that involves a platform connecting a mass of sellers and buyers.	<ul style="list-style-type: none"> ✓ Producers ✓ Content generators ✓ Content creators ✓ Sellers ✓ Product ✓ Services
Hagi & Wright, (2015)	Multisided platform is platform works as a marketplace where customers and sellers meet and conduct their transactions. This aspect replaces the traditional supply channels and middlemen.	
Sanchez-Cartas & Leon, (2019)	Multisided platform is platforms work as matchmakers where they play the intermediation role.	(Øverby & Audestad, 2021)
Evans & Schmalensee, (2016)	Multisided platform acts as the connector between the demand and supply sides. It acts as an intermediary and facilitates the transaction between the parties. However, for the platform to be useful, it must be valuable and relevant.	

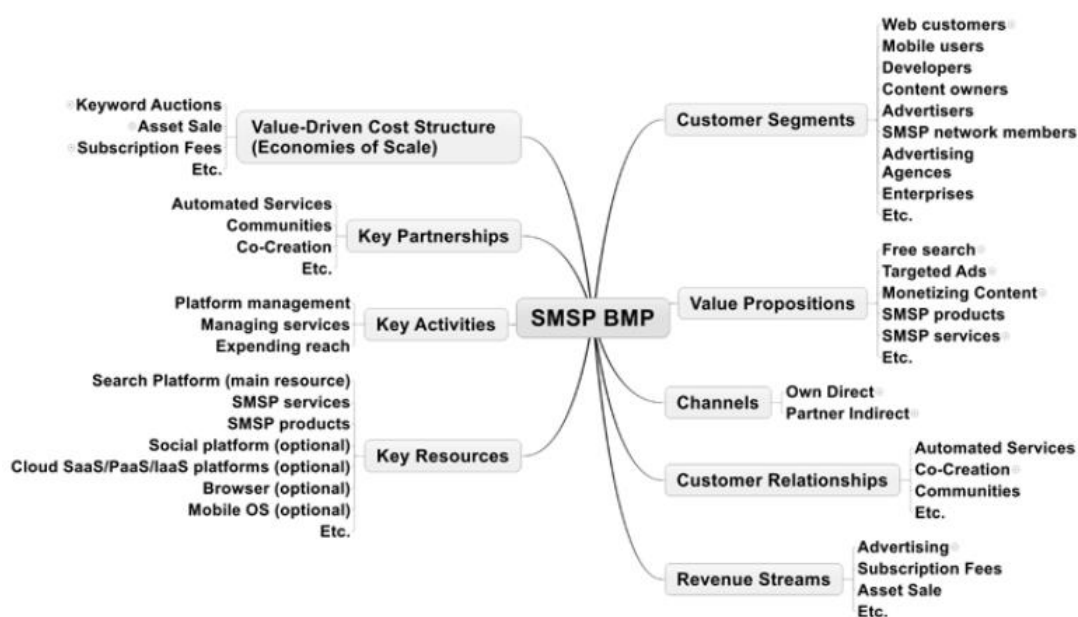


Figure 2. Search MSP Business Model Pattern (SMSP BMP)

Digital Multi-sided Platform (MSP)

The literature helps to identify the main characteristics of a digital multisided platform (DMSP). First, multisided platforms differ from traditional businesses model because of interactions and transactions among users of two or more participating sides (Cusumano, *etc.*, 2019; Daiberl, *etc.*, 2019). Therefore, it is fundamental to implement a structure able to maximize the size of the sides (Evans & Schmalensee, 2016). Typically, it is possible to identify a supply side, the group of users offering or providing a product or a service, and a demand side, consisting of the users who use or benefit from the contents (product or services) provided by the supply side (Fürstenau, *etc.*, 2019). A critical role in a multisided platform is the platform manager, who mediates users' interactions and serves as the users' primary contact point with the venue (Gawer & Cusumano, 2014). In addition, advertisers may be present as a third side involved (Otto & Jarke, 2019). MSPs also have peculiar pricing and revenue models. Since two or more sides are affected, the platform manager must deal with the pricing issue of whether and how much the different sides charge (Patrucco, 2014).

Sustainable Development Goals (SDGs)

Development is a continuous process between various social, economic, and environmental dimensions aimed at the welfare of society in general (Fitriyanti, 2019). Sustainable development is a development process in every country focused on land, cities, businesses, and the community's economy with the principle of meeting the needs of the present without compromising the fulfillment of future generations. Sustainable development goals are a translation from English; sustainable development goals are one of the factors that every country must face to achieve sustainable development, namely focusing on repairing environmental, health, education, and economic damage that is oriented toward social justice development without inequality in every citizen (Alfiani & Akbar, 2020). Sustainable development (SDGs) is an action plan for humanity, the planet, and prosperity that aims to strengthen universal peace in extensive freedom without being marginalized by certain groups. In short, sustainable development (SDGs) designed to address poverty in all countries is an extreme global challenge (Gustani & Yulinar, 2021).

Post-2015, also known as the sustainable development goals (SDGs) scheduled for 15 years until 2030, is one of the work programs that will serve as guidelines for developing countries worldwide. The concept of sustainable development goals (SDGs) can be used as a framework and new development program that is oriented to accommodate all forms of change that occurred after 2015 (Suprayitno, 2018), millennium development goals (MDGs) related to changes in the world situation since 2000 regarding issues of natural resource depletion, environmental damage, increasingly crucial climate change, social protection, food and energy security and development that is more pro-poor (Ahmad, *etc.*, 2013).

Table 4. Definitions and indicator of sustainable development goals (SDGs)

Author	Definition	Indicator
Rosati & Faria, (2019)	Sustainable development is development that aims to improve the quality of life of people around the world, both from present and future generations, without exploiting the use of natural resources that exceed the capacity and carrying capacity of the earth.	<ul style="list-style-type: none"> ✓ Economic growth and equity; ✓ Social development; ✓ Natural resource conservation (environmental protection); ✓ Good governance
Fekih Zguir et al, (2021)	Sustainable development goals are a set of goals, targets, and indicators for sustainable development that are universal.	<ul style="list-style-type: none"> ✓ No poverty ✓ Zero hunger ✓ Good health and well-being
Pizzi et al., (2020)	Sustainable development goals explicitly aim to eradicate poverty and hunger, reduce inequality within and between countries, improve water and energy management, and take urgent steps to address climate change.	<ul style="list-style-type: none"> ✓ Quality education ✓ Gender equality ✓ Clean water and sanitation
Pizzi et al., (2021)	Sustainable development goals emphasize the importance of efforts to end poverty to be carried out together with strategic efforts to increase economic growth, implement social policy measures to meet various social needs (such as education, health, social protection, employment opportunities), and policy measures to address climate change and environmental protection.	<ul style="list-style-type: none"> ✓ Affordable and clean energy ✓ Decent work and economic growth ✓ Industry, innovation, and infrastructure ✓ Reduced inequalities ✓ Sustainable cities and communities
Turoń, (2022)	Sustainable development goals cover a wide range of social and economic development issues. These include poverty, hunger, health, education, climate change, water, sanitation, energy, environment and social justice.	<ul style="list-style-type: none"> ✓ Responsible consumption and production ✓ Climate action
Noh, (2020)	Sustainable development goals is a sustainable development program in which there are 17 goals with 169 measurable targets with specified deadlines,	<ul style="list-style-type: none"> ✓ Life below water ✓ Life on land ✓ Peace, justice, and strong institutions ✓ Partnerships for the goals.

(Bose & Khan, 2022)



Sources: [United Nations \(2022\)](#)

Figure 3. Agenda for Sustainable Development Goals (SDGs)

Research Method

The qualitative approach and type of literature research are the methods used in this article. Utilization of existing library materials in exploring concepts and theories as primary data sources, which have been explained by several experts and previous researchers by research development compared to what will be studied to get a more comprehensive orientation regarding topic selection (Creswell, 2017; Singarimbun, 1982). The object of this research is the GoTo Group company and uses data collection techniques through documentation (Konto, 2006). The data that has been collected is analyzed through three steps of descriptive-analytical methods, namely data reduction, data presentation, and concluding (Emzir, 2014). The theory used as an analytical knife is the open innovation theory by Henry Chesbrough. This method provides an understanding of open innovation on a multi-sided platform business model that can contribute to sustainable development goals.

In detail, we used Google Scholar as a database to identify literature related to open innovation, business models, multi-faceted platforms, and sustainable development goals. The keywords we use are open innovation, business model; multi-sided platform; Gojek; Tokopedia; GoTo Group, and SDGs. Through the top 100 manuscripts for each category as initial data. We reduce it so that there are 28 types of literature for open innovation, 26 for business models, 20 for multi-faceted platforms, and 15 for sustainable development goals. Next, we reduced the data by reading the abstract of each manuscript, presenting each literature as a reference, and finally looking for conclusions from the reduced literature. After the decision is reached, we assess the business model run by Go To Group and describe the data obtained with findings at the literature review stage.

Result and Discussion

Open Innovation on Go-To Group

Innovation plays a vital role in the company's growth and controlling competition. Innovation is also the basis for developing entrepreneurship. Therefore innovation cannot be separated from running a business. At this time, innovation has been significantly expanded, and all companies innovate, these innovations are not only carried out by large companies, but even small companies must innovate to maintain business continuity (Sasono & Yuliana, 2014). Innovation shows the ability to build something new (Fagerberg et al., 2005). According to Hurley et al. (2004), innovation is a result of activities to change and create a new invention related to the process of creating or products made using more creative ideas for the company. The company's primary goal to continue encouraging innovation is to improve company performance. With innovation, the company will continue to exist and make improvements in the production process, thus giving the company a positive impact to compete with other companies (Cheng et al., 2014).

In today's competitive global era, innovation is one of the critical success factors for company growth and resilience. Companies are not only focused on creating new innovative products and services, but to remain competitive, companies must also continue to innovate their business models to cope with the ever-changing business environment (Hamel, 2007). The Organization for Economic Co-operation and Development (OECD) has also found that innovation is the main factor determining a country's long-term economic growth, increasing productivity, and innovation is even more critical to the economy than capital or labor resources alone (OECD, 2008). Many companies have implemented innovations with closed innovation methods and open innovation methods. However, most small and medium-sized companies still use a fast innovation approach, where the company only uses the company's internal resources to produce innovation.

Chesbrough (2006) suggests that there has been a paradigm shift from a closed innovation paradigm to an open innovation paradigm. In the fast innovation model, the company produces innovation only by using the internal resources and technology owned by the company, starting from creating, developing, and marketing ideas (Van de Vrande et al., 2009). Some companies still practice closed innovation because of the belief it can be strategically advantageous to keep ideas and technologies internal to others, even when the firm is not using those ideas and technologies. On the other hand, in the open innovation model, companies can take advantage of external and internal ideas to find and develop innovations (Chesbrough, 2006). Chesbrough (2007) also states that open innovation uses intentional inflows and outflows of knowledge to accelerate the company's internal innovation process and expand the market to benefit from external innovations. Open innovation will involve the company's internal resources, including; employees and internal researchers, as well as external parties such as; consumers, suppliers, and external researchers, to work together to innovate (Chesbrough, 2002). The following are the differences between closed and open innovation models, as seen in Figure 4.

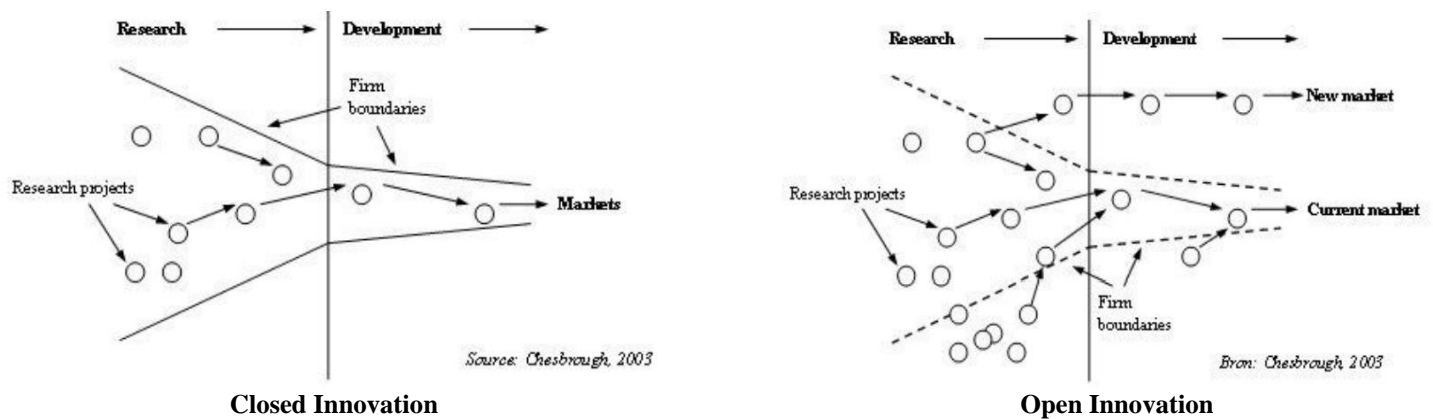


Figure 4. Differences between Closed and Open Innovation Models

Table 3. Contrasting Principles of Closed Innovation and Open Innovation

Closed Innovation Principle	Open Innovation Principle
The smart people in our company only work for us.	Not all smart people work for us, therefore we must find and utilize the knowledge and expertise/intelligence of individuals outside the company.
The company's profit comes from internal R&D, for that we have to find, develop and market it ourselves.	By combining the use of external and internal R&D, the company can maximize significant innovation.
If we make the discovery first, then we will get the market first.	Profits need not be derived from the first invention.
If we are the first to commercialize the innovation, we will win.	Building a business model carefully and well will produce better results than rushing to market it first.
If we create the most and the best ideas, then we will win.	If we make the best of our internal and external ideas, we will win.
We must control our intellectual property (IP) so that our competitors cannot take away our company's ideas.	The company's IP can be used to generate profits and the company can buy other company's IP to be used to advance business capital.

Source: Dufour & Son (2015)

Figure 4 shows the difference between closed innovation and open innovation. Closed innovation has limited scope for resources and relies primarily on internal resources, whereas open innovation is free from these limitations and conveys a broader range of external resources. In addition, there are contrasting principles between closed innovation and open innovation.

Furthermore, Table 3 shows the principle differences between closed and open innovation; the main difference lies in the duality of internal and external. In fact, innovation has a high degree of independence, such as finding, creating, developing, and marketing their own using their interior ideas. In contrast, open innovation settings are more extreme, using actions taken internally and externally to address the complexities of today's products and technologies.

According to the open innovation paradigm, it is difficult for companies to have all kinds of knowledge; this also applies to Gojek and Tokopedia. Gojek is the leading on-demand mobile payment and service platform in Southeast Asia, while Tokopedia is a technology company with a top market in Indonesia. Gojek and Tokopedia are two well-known companies that people throughout Indonesia often use. Initially, Gojek and Tokopedia adopted a closed innovation model by developing their companies independently. But in 2021, Gojek and Tokopedia will collaborate by merging the two into one group, namely the Go-To Group. GoTo Group is the largest technology group in Indonesia. It is the mainstay of the community's ecosystem by providing various solutions to live their daily lives (the "GoTo" ecosystem for everyday life). GoTo Group is the largest collaboration service in Indonesia and the most extensive collaboration between two internet and media companies in Asia to date.

After the formation of GoTo Group, Gojek, which initially stood alone with several services provided, is now expanding by cooperating with Tokopedia and vice versa. The innovation formed by the GoTo Group is GoTo Financial (Financial Technology). GoTo Financial is an innovation from a technology

group engaged with a mission to empower individuals and businesses to realize their dreams of financial security and a better life. The following is the development of Gojek and Tokopedia from the beginning to collaborating to become the GoTo Group.

Table 4. The development of Gojek and Tokopedia into GoTo Group

Year	Gojek	Year	Tokopedia
2010	Gojek started as a call center.	2009	Tokopedia was born as a website-based marketplace platform.
2015	Gojek launched a mobile application with four main services, namely: GoRide, GoFood, GoSend, and GoMart.	2014	The Tokopedia company has started to launch the Tokopedia application.
2016-2017	Gojek launched GoPay and GoCar services. In addition, Gojek is the first unicorn company in Indonesia.	2015	The Tokopedia company started offering digital products through the Tokopedia application.
2018	Gojek launches GoPay Open Loop. Gojek also has the opportunity to visit Vietnam and Singapore.	2017	Tokopedia company starts to launch B2C (business to customer) marketplace
2019	Gojek has the opportunity to expand to Vietnam and Thailand. Gojek is also the first decacorn company in Indonesia. In addition, Gojek is also rebranding Gojek in all countries where the company operates.	2018	The Tokopedia company has started to launch trading services for the public, especially outside big cities, through the Tokopedia Partner application.
2020	Gojek launched an integrated application and brand throughout Southeast Asia (Indonesia, Singapore, Thailand, and Vietnam).	2021	1. The Tokopedia company synergizes with Gojek to become GoTo: a flagship ecosystem for everyday life that combines on-demand services, e-commerce, and financial technology. 2. Launching TokopediaNOW! which is an instant commerce service with a delivery duration of less than 2 hours.
2021	Gojek and Tokopedia merged to become GoTo, the largest technology company in Indonesia and become the "GoTo" ecosystem for all daily needs.		Gojek and Tokopedia through the GoTo Group created new innovations in the form of financial technology services, namely GoTo Financial. There are various services on GoTo Financial, namely: Midtrans, Moka, GoStore, Selly, GoBiz. GoBiz Plus, GoModal.

Source: Gojek (2022); GoTo Company (2021b)

Although the Gojek and Tokopedia companies were initially based on a closed innovation system, various factors, including globalization, increasing competition, and increasing development of new technologies, made a paradigm shift from a closed innovation paradigm to an open innovation paradigm in the business environment; they had to open up their boundaries and rely more on sources. External knowledge. In addition, because the costs of developing technology are high and innovating requires significant investment, innovating with a closed model no longer guarantees profitable results and makes innovation development more expensive and riskier. Thus, the Gojek and Tokopedia companies are trying to diversify business risk across various sources and, at the same time, reduce R&D costs by merging the two into the GoTo Group and creating innovations such as GoTo Financial; this is in line with Chesbrough's (2002) open innovation paradigm, according to which companies should take advantage of both internal and external sources of knowledge; exploiting internal and external channels to the market to find and develop innovations.

Open Innovation with a Multi-sided Platform (MSP) Business Model on GoTo Group

Gojek and Tokopedia collaborating to become the GoTo Group are not without reason; both feel that they do not have sufficient internal capabilities to create their knowledge needs, so they both feel the need to combine them and design innovations. On the other hand, the merging of Gojek and Tokopedia into the Go-To Group can undoubtedly play a significant role in the open innovation paradigm by taking an approach where Gojek and Tokopedia can benefit through collaboration with external resources such as providing ideas to global companies and generating innovations by buying a license for the knowledge and technology they lack (Kim & Park, 2010).

GoTo Group brings together the strengths of two of Indonesia's leading technology companies by creating a unique and complementary ecosystem globally. Combining e-commerce services, delivery of goods and food, transportation, and finance, GoTo Group will make Indonesia's most prominent digital consumer platform, serving most household consumption needs. The complementary network of business partners and driver partners within the GoTo Group will provide an unrivaled selection of goods and services supported by digital payment and financial services that will further simplify people's lives while significantly increasing financial inclusion. The services provided by GoTo Group are as follows in Figure 5.



Source: [GoTo Group Company, \(2021a\)](#)

Figure 5. Go-To Group Service (Gojek-Tokopedia)

GoTo Group has a total Gross Transaction Value (GTV) of more than US\$22 billion by 2021; more than 1.8 billion transactions by 2021; more than two million registered driver partners as of December 2021; more than 11 million business partners (merchants) as of December 2021; more than 100 million monthly active users (MAU); contribution of 2% to Indonesia's total GDP. Indonesia has a GDP of more than USD 1 Trillion and is the fourth most populous country in the world, with a total population of 270 million. The GoTo Group will tap into the vast growth potential of Indonesia's economy - the largest in Southeast Asia - which has a fast-growing middle-class segment and a young population that is highly responsive to technology.

GoTo Group will also continue to develop its business in the rapidly growing non-Indonesian market where Gojek operates. The presence of GoTo Group, which provides fast delivery services with various digital services, will make same-day e-commerce delivery a standard of daily practice in Indonesia. GoTo will further improve its payment and financial services to reach around 140 million people with limited access to the financial system in Indonesia.

The change from a closed innovation model to an open innovation model at the GoTo Group, which previously were Gojek and Tokopedia, made them build an innovative business model. The open innovation business model used by GoTo Group companies is the multisided platform (MSP) business model, which in detail is Followed in Figure 6.

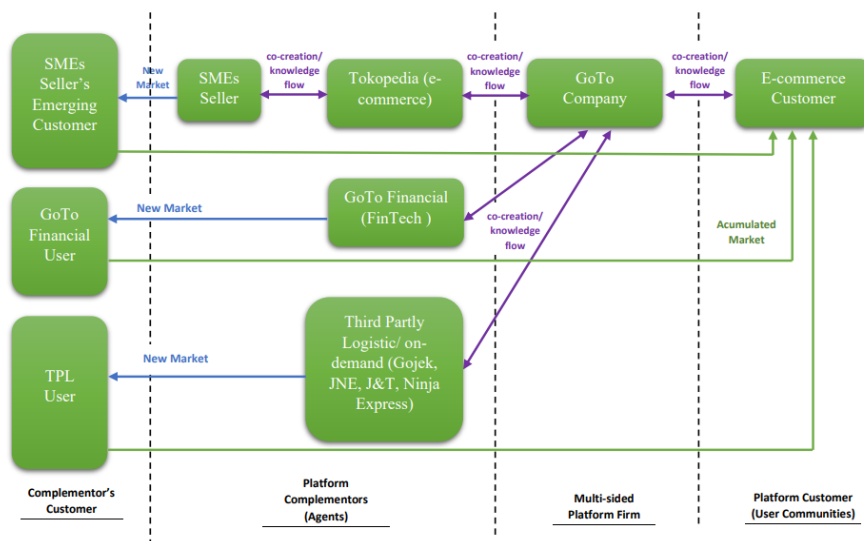


Figure 6. GoTo Group company's multi-sided platform business model

In simple words, the multisided platform value proposition is a matchmaker. They don't produce content or products, and they don't offer the service itself. To play this role as an intermediary, the platform must be relevant. If Uber had just created an app, but few people found it interesting or valuable, there would be no passengers looking for drivers, so there will be no demand. Not many people will know the benefits if Tokopedia can't monetize its business. If YouTube can't monetize its business, content producers and advertisers won't use it as a business either. It's just a kind of video storage for people to have fun. The multi-side platform creates value for participants by facilitating the exchange of goods and services. New companies and sellers can start selling their products with low investment, especially saving on advertising. And shoppers have the convenience of buying things from home in a safer - and often less expensive - way. Transaction platforms create value by benefiting buyers and sellers without manufacturing or storing products. Owners and drivers can enjoy marketing and applications to reach customers who can have a car or place within reach of a smartphone.

It's the same with the multisided platform business model at GoTo Group, which combines Gojek and Tokopedia. Gojek and Tokopedia, founded more than a decade ago, have unlocked the benefits of the digital economy for millions of people in Indonesia and Southeast Asia - including consumers, driver-partners, and merchants of all sizes. Gojek driver-partners will have more excellent income opportunities, among others, by sending more orders from Tokopedia users. At the same time, sellers and merchant partners of various business scales will get multiple benefits and opportunities to increase their business. The presence of the GoTo Group will further support companies to encourage financial inclusion in Indonesia and Southeast Asia.

Contribution of Open Innovation with MSP Business Model on Go-To Group in Supporting SDGs

In this sub-discussion, the researcher sees that open innovation with a multi-sided platform business model on the GoTo Group can support several sustainable development goals; this is proven by the measure of the success of the GoTo Group company, which is very concerned about environmental, social, and economic impacts. GoTo Group companies integrate the main principles in the company's operations and development and ensure that all of our activities create long-term interests for all stakeholders. In open innovation with a multi-sided platform business model, the approach to sustainability is carried out by listening to the opinions and perspectives of stakeholders; using a scientific attitude and a data-driven approach; integrating sustainability into the company's core operations; empowering customers, driver-partners and business partners; leveraging technology and innovation for acceleration.

The following are the principles that serve as guidelines and the basis for the sustainability strategy and approach of the GoTo Group of companies. The GoTo Group's sustainability development goals

framework covers three pillars: GoGreener, GoForward, and GoTogether (GoTo Company, 2021a) (see Figure 6).



Figure 7. Principles of Sustainability Strategy



Source: GoTo Company, (2021a)

Figure 8. Contribution of the GoTo Group's sustainability principles

The sustainable development goals (SDGs) proclaimed by the United Nations (UN) outline the world's most pressing challenges and are a blueprint for us to respond to these challenges collectively. The SDGs adopted by UN member states in 2015 serves as a guide to achieving the goals of "reducing poverty, protecting the earth, and ensuring peace and prosperity by 2030". At GoTo Group, the company is committed to always aligning every company's sustainability activities and efforts with the SDG's targets to ensure the achievement of tangible and measurable impacts. The following are the contributions of GoTo Group's sustainability principles to sustainable development goals, as seen in Figure 7. Based on Figure 7, firstly, GoGreener and GoTo Group commit to business transformation to mitigate the environmental impact caused by the company. In addition, through GoGreener, collaboration with various stakeholders to ensure the GoTo Group is always at the highest level of environmental standards, as well as efforts to utilize technology and platforms to facilitate partners and customers to make a similar transition, are some of the things described under the topic materiality "Climate Change," "Air Quality," and "Plastic Use and Management." Second, GoForward, as a global company with strong ties to Indonesia, GoTo Group contributes to socio-economic development in the countries where we operate by supporting micro, small and medium enterprises (MSMEs) and empowering micro-entrepreneurs with various opportunities to earn income and improve livelihoods through the GoTo Group platform. Third, GoTogether, the GoTo Group provides equal opportunities in the workplace and ensures that everyone in our ecosystem is valued,

involved, and feels safe and supported. Thus, based on the three pillars of sustainability principles carried out by GoTo Group companies to support sustainable development goals. The researcher describes in detail the approaches and initiatives of the GoTo Group companies, which can be seen in Figure 8.

SDGs Target	GoTo Group's main approaches and initiatives in 2021	SDGs Target	GoTo Group's main approaches and initiatives in 2021
 1.1, 1.4	<p>GoTo Group seeks to build an ecosystem where all its corporate partners can grow and develop. On the GoTo Group platform, they continue to drive inclusive growth, empowering driver partners as well as micro, small and medium enterprises to improve livelihoods and economic resilience. GoTo Group's main initiatives include capacity building and training (Partner Learning Workshop for driver partners and Gojek Wirausaha for driver partners and business partners), as well as access to microcredit for business expansion through the GoTo Financial program, namely GoModal.</p>	 7.2, 7.3	<p>As GoTo Group strives to be a carbon neutral platform, they are leveraging the best of science, research and technology to build clean energy and mobility systems. The annual carbon inventory begins in 2021 to identify and inform the transition to renewable energy.</p>
 3.8, 3.9	<p>In an effort to ensure a healthy life and promote well-being for everyone in the GoTo Group ecosystem by offering programs and access to social and financial security schemes, as well as health and life protection for driver partners. Driver partners can access the Swadaya 2.0 feature in the GoPartner application which allows them to enroll in various private insurance and government guarantee schemes.</p>	 8.2, 8.3, 8.4, 8.5	<p>GoTo Group is increasing its efforts to contribute to inclusive and sustainable economic growth through diversification, technology and innovation to enable everyone in our ecosystem to have decent jobs and opportunities in the digital economy. GoTo Group collaborates with PromoGoTo provide additional income opportunities for driver partners by carrying advertisements while driving. GoTo Group also launched GoCheck, a feature in our app that driver partners can use in their spare time to perform additional tasks and earn extra income.</p>
 5.1, 5.5	<p>Gender equality and women's empowerment are priority areas of the GoTo Group. GoTo's current initiatives are advocating for women to take leadership positions, raising awareness through events and webinars, and establishing the Women@Gojek employee resource group as part of our broader efforts to promote diversity, equality and inclusion. In 2020, in particular, Gojek opened daycare facilities at the Head Office in Jakarta, and breastfeeding rooms have been provided since 2019 in all of our offices.</p>	 10.4	<p>In an effort to reduce inequalities across the ecosystem, GoTo Group is assisting driver partners and business partners by opening access to financial and social protection schemes, diversifying income-generating opportunities through our platform, and investing in skills-building initiatives to achieve greater inclusion in the digital economy. .</p>

	<p>GoTo Group strives to provide an affordable, accessible and sustainable mobility system. The GoTransit feature helps realize an integrated mobility system where driver partners become the first mile and last mile connectivity providers, to encourage the use of public transportation.</p>		<p>In order to make a meaningful contribution to protecting life under water and life on land, the GoTo Group is completing an inventory of greenhouse gas (GHG) emissions covering Scope 1, 2 and 3 emissions. The results will form the basis for our development and measurement of initiatives. to reduce greenhouse gas emissions.</p>
<p>11.2</p>	<p>14.2, 14.4, 14.5</p>	<p>In addition, starting in 2021, GoTo Group will hold an annual plastic waste count, to identify the best strategy to reduce their waste footprint.</p>	
	<p>As an effort by GoTo Group to contribute to responsible consumption and production, they started a program to reduce single-use plastic while continuing to innovate to prevent waste pollution in their ecosystem.</p>		
<p>12.2, 12.4, 12.5</p>	<p>15.2</p>		<p>In all countries where GoTo Group operates including Indonesia, they follow government policies and long-term goals to address climate change issues by raising awareness and increasing their ecosystem's mitigation and resilience to climate change risks and adaptation within their ecosystems. Carbon reduction through the GoGreener Carbon Offset feature in their application has been registered with the National Registration System managed by the Ministry of Environment and Forestry, to support the Indonesian Government's target of reducing emissions by 29% by 2030.</p>
<p>13.2, 13.3</p>		<p>In countries where GoTo Group operates, they comply with all laws and regulations that apply to their business. Their Code of Conduct explicitly prohibits employees from engaging in corruption and bribery. All of their employees have taken mandatory training on the Code of Ethics at orientation and they have annual training to promote ethical business practices throughout the organization.</p>	<p>16.3, 16.5, 16.6</p>

Source: [GoTo Company, \(2021a\)](#)

Figure 9. Sustainability principle approach in supporting sustainable development goals

Conclusion

Open innovation uses knowledge inflows and outflows to encourage innovation and market expansion to benefit their respective innovations. The open innovation discussed in this article is a genuine innovation in the multi-sided platform business model used by the GoTo Group companies. GoTo Group is an example of a multi-sided company platform that combines Gojek and Tokopedia. GoTo Group is an example of a company that was initially a closed innovation; in 2021, it turned into an open innovation with the aim that Gojek and Tokopedia can help support micro, small and medium enterprises (MSMEs). Based on the literature conducted, the researcher found that the discovery of the Gojek and Tokopedia companies to become the GoTo Group could contribute to the goal of sustainable development. It can be seen from the discussion above that the GoTo Group has three pillars that lead to sustainable development goals. The three pillars are: GoGreener, GoForward, and go together.

The contributions of these three pillars to sustainable goals are: (1) alleviating poverty; (3) good health and well-being; (5) gender; (7) clean and affordable energy; (8) decent work and economic growth; (9) infrastructure, innovation industry; (10) reduce; (12) responsible consumption and production; (13) climate change management; (14) maintain marine ecosystems; (15) maintain terrestrial ecosystems; (16)

partnerships to achieve goals. But this is not in line with thinking. The researcher considers that open innovation with a multi-sided platform business model at the GoTo Group company should contribute to building sustainable points (11) for sustainable cities and communities and issues (17) for partnerships to achieve goals. Because open innovation is carried out with a multi-sided platform, the business model requires partnerships with various stakeholders and external companies to reflect the implementation of sustainable open innovation. In addition, open innovation with a multi-sided platform business model at the GoTo Group company can not only contribute to sustainable development goals. Still, it can also indirectly increase financial inclusion in Indonesia. The contribution of this study is to provide an understanding of open innovation by using a multi-sided platform business model, which is still rarely discussed by previous researchers. As for the limitations of this study, in collecting data sources, the researchers only used secondary data and focused on the multi-sided platform (MSP) business model in the GoTo Group. So it is necessary to conduct further research in the future to discuss the multi-sided platform (MSP) business model in other industries more in-depth with the support of primary and secondary data sources.

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