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# Ambidexterity Behavior of Creative SMEs for Disruptive Flows of Innovation: A Comparative Study of Indonesia and Taiwan

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**Abstract:** Disruptive innovation forces small-business managers to innovate by carrying out exploitation and exploration activities simultaneously. This ambidexterity is crucial to the survival of today's businesses, especially small and medium-sized enterprises (SMEs). In the organizational structure of SMEs, the manager and owner play an essential role in determining the business orientation. This study examined the influence of SME managers' social networks on the organization's ambidexterity and its impact on the firm's innovation performance. This study used two moderating variables in the form of two internal factors in respect to managers: how proactive they are and their commitment to innovation. The study population was drawn from SMEs in the creative manufacturing sector in Indonesia and Taiwan, with a total sample of 224 SMEs, including 101 from Indonesia and 123 from Taiwan. The analytical technique was the PLS-SEM, conducted by the Smart-PLS software version 3.3.6: Hamburg, Germany. The results supported the construction in both countries. The results of the multiple-group analysis show that the SMEs in Indonesia exhibited greater ambidexterity, commitment to innovation, and innovation performance than those in Taiwan.

**Keywords:** ambidexterity; managerial social networks; proactive managerial; commitment to innovation; innovation performance; SMEs

## 1. Introduction

Every organization faces a complex business environment and competition [1,2]. Several factors may cause an organization to transform immediately, including competition between organizations [3,4] and a shorter product life cycle [5]. Organizational ambidexterity is an organization's ability to efficiently manage its business and adapt to environmental changes [6]. The concept of ambidexterity in the business context has received serious attention from researchers in recent years, and it has significantly affected business performance [7]. Organizations and scholars have long sought to characterize and explain how businesses can direct their strategic orientations toward two distinct activities—exploitation and exploration—in a process known as ambidextrous strategy development [8–10]. An ambidextrous person can use both hands equally; this ability is only innate in one in a hundred people. Whether or not a person is ambidextrous is determined by their flexibility with each hand. In the business context, researchers' primary focus is on describing the structural, contextual, and temporal foundations for this ability. Senior executives are critical in evaluating and integrating knowledge, and doing so is a prerequisite for exploitation and exploration by the organization [11]. All companies have a unique way of processing their knowledge for exploitation or exploration [1,12]; disrupting the momentum of self-strengthening toward a single knowledge orientation is one of the essential functions of ambidexterity.



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Top managers have an essential role in creating ambidexterity [2,13]; several studies have documented that social networks help managers and companies prioritize positions to obtain information for the purposes of exploitation and exploration [14–16]. The concept of managerial social capital can be used to explain how top managers access and mobilize the dual knowledge required for ambidexterity [17]. Managerial network expansion—defined as the strength of the interconnections between managers and actors inside and outside the organization—generates ambidexterity and has knowledge-related benefits [14,15]. In addition, network breadth is one factor that can determine a company's success [18]. Relationships among managers and employees in various functional units and divisions such as marketing, engineering, and research and development serve as organizational communication channels. These allow top managers to identify, access, and interpret company-specific knowledge [18]. Outside the firm, top managers' relationships with the customers, suppliers, competitors, financial companies, industry authorities, and government agencies act as conduits for knowledge that can shape their perspectives on the environment and broaden the range of views, information, and decision alternatives available for consideration [14,15].

Expanding the networks of top managers supports the dual knowledge needed for ambidexterity. While a broad network may explain how top managers gain access to knowledge, it does not adequately explain the extent to which, and under what conditions, top managers mobilize and use that knowledge from their broad network's knowledge to achieve ambidexterity. The opportunities for exploitation and exploration are fleeting and require the commitment of company resources [19]. The extent to which managers' extensive social networks contribute to organizational ambidexterity depends on their willingness to transform the knowledge and experiences from those networks into ambitious actions [20]. This managerial resolve is founded on two fundamental behavioral characteristics. First, being proactive may influence how responsive top managers are in exploiting and exploring their ties and networks within and outside the organization [21]. A manager can take advantage of these opportunities with appropriate and timely commitment [15]. Therefore, the contribution of management networks to ambidexterity is dependent on the extent to which the top management team demonstrates a "proactive commitment to innovation" or the capacity to match a strategic commitment to market opportunities with the investment needed to seize those.

An organization's transformation is also caused by changes in its internal and external environmental conditions [22]. One example of a change in environmental conditions is the emergence of the COVID-19 pandemic, which resulted in many economic sectors suffering significant losses [23]. Indonesia context is a particular sample where small and medium-sized enterprises (SMEs) have been significantly affected. A survey conducted by the Government of Indonesia in 2020 had that the various problems resulting from the COVID-19 pandemic can be classified as either financial or non-financial [24], including reduced orders, an increase in raw-material prices, difficulties in distributing products, and reduced demand. The impacts on SMEs of financial and non-financial factors include a decrease in income of 40 to 80 percent [24]. Meanwhile, the Annual 2021 White Paper in Taiwan reported an increase in the number of SMEs in 2020. More than 1.5 million enterprises operate in Taiwan, and most of those 98 percent are SMEs [25]. Furthermore, several essential government policies have been launched to push growth and enhance firm performance [26,27]. Unsurprisingly, Taiwanese SMEs are the cornerstone of efforts to meet sustainable development goals [28]. Organizations can deal with competition and changes in their business environment by innovating [1,2]. Thus, innovation is essential for organizations to survive in a dynamic environment [29,30], and it is a vital tool for companies wanting to achieve competitive advantage in the global market [2,31]. An organization's successful innovation cannot be separated from the contribution of its human resources [32]. Unfortunately, scholars are inconsistent in the identification of which factors affect innovation performance. The previous studies witnessed fragmentary results depending on the research context or individual author's perspective [7,33,34]. Particularly, a lack of investigation to compare the measurement of innovation performance across countries is a significant research gap.

This study aimed to evaluate the relationship between social networks, ambidexterity, and innovation performance by considering owners or managers of SMEs in the creative industry in Indonesia and Taiwan. According to the World Development Indicators, Taiwan and Indonesia are two economies with different levels of economic development. Indonesia is an emerging market, while Taiwan is a high-income economy group [33]. Hence, it is meaningful to examine the comparison of ambidexterity behavior regarding innovation in SMEs of these contexts. The authors also examined the managerial antecedents of ambidexterity by showing how an extensive managerial network helps fulfill the dual knowledge requirements of ambidexterity in these SMEs' innovation performance. The authors then added nuance to the theoretical framework and offered several practical implications by analyzing the indirect path to ambidexterity, which requires a manager's proactive commitment to innovation.

### 2. Literature Review and the Theoretical Framework Development

# 2.1. The Relationship between Social Networks, Proactiveness, and Ambidexterity

Exploitation and exploration are both considered critical to a company's long-term existence and success [12,34], and combining the two requires top management to engage in complex knowledge input and practices [35,36]. Exploitation activities involve using and developing existing knowledge, while exploration involves developing new knowledge [9,37]. Managers draw on multiple sources of knowledge and rely heavily on their networks, both inside and outside the company [15,37]. Managers or owners of SMEs build relationships with employees to obtain their support in developing knowledge about the company's operational activities and to gain insight into elements that can potentially increase its competitiveness. Managers in creative SMEs must build relationships with customers and government agencies to improve their insights into the performance of existing technologies and thereby obtain ideas for improving existing designs and creating new designs to meet customer needs. Thus, an SME manager's social network serves as a conduit for obtaining essential knowledge and as a point of reference for interpreting how that knowledge should be applied.

Previous studies show that social networks allow managers to carry out exploitative activities and explore knowledge processes [15]. Social capital is directly linked to promoting evolutionary and revolutionary innovation simultaneously by enabling managers to apply and expand their knowledge, facilitating the acceptance of radical ideas, and encouraging companies to produce new things [38,39]. The internal social capital of a company's operational divisions can also provide the social means to integrate and positively impact exploitation and exploration activities [16,40]. Other researchers have argued that social networks are a medium for the exchange of ideas for innovative outputs and are sources of ideas for solving problems faced by companies [15,41].

The results of various studies show that the knowledge foundation for exploitation and exploration at the managerial level may be strengthened by seeking advice from various sources, including internal and external [42], top-down, bottom-up, and horizontal knowledge flows [36]. For example, Cao et al. (2010) claimed that the more comprehensive a manager's social network is, the greater their chances of accessing valuable information promptly are; therefore, a comprehensive social network positively impacts ambidextrous behavior [14]. In other words, a top manager having an extensive network contributes to achieving an ambidextrous company orientation. This accomplishment is even more critical when the manager demonstrates a proactive commitment to innovation and a strong proclivity for utilizing network resources for ambidexterity [15,41].

Furthermore, social networks are critical sources of information for top executives, not every network has the same reach [15]. The social network concept developed by Cao et al. (2010) states that the reach or breadth of a managerial network is defined as the strength of managers' internal contacts [14]. This network comprises research and development

divisions, production, marketing, services, administration, and other units and a collection of contacts from outside the company, such as board members, suppliers, customers, financial agencies, competitors, government/institutions, and industry authorities. Social networks emphasized the frequency, duration, and intensity of interpersonal contacts [15].

Interaction with colleagues in a widespread network over a long period and in an emotionally intensive way [43] will create a solid and beneficial bond, especially when knowledge and insight are transferred through the network. High-frequency communication with solid social-network ties allows for more effective communication between parties seeking to develop experience-specific relationships [15,36]. Strong social networks that have been built over a long period help in developing mutual trust between business partners [15]. Strong ties in managers' more emotional social networks generally trigger positive behavior in the form of a willingness to share knowledge and complex new ideas with other network members [1,44]. Previous studies indicate that solid bonds allow for a deeper, more personal, and unique flow of knowledge that can be acted upon [15], thereby enhancing firms' ability to create and integrate knowledge [6,11]. Exploitation activities are related to efforts used to leverage a firm's existing competencies. A company's vast network thus enables managers to maintain and expand their knowledge of products, processes, technological capabilities, and potential developments [6].

Managers have a responsibility to continuously improve the quality in the flow of knowledge about the company's unique resources and competencies and to find the best way to exploit its assets [14]. In the SME context, senior managers also provide a sense of mutual trust and psychological security that ensure that lower-level employees are willing to share their knowledge [45]. Furthermore, a broad network of ties can, in turn, strengthen the knowledge-exploration activities carried out by managers.

Exploration activities originate from a company's lower levels in autonomous strategies, experiments, and learning experiences [46,47] and are also identified from the needs of external stakeholders. External parties can also confirm that a company's existing configuration of resources and processes comply with environmental requirements. Strong network connections with external stakeholders can support the unique configuration of the company's resources and production processes in line with the demand for a green environment. These connections can also provide distinct insights that allow managers to better understand and reason in relation to the impact of changes, shifts, and discontinuities of a highly competitive business environment [1,48]. In addition to knowledge in respect to exploitation and exploration, managers must be able to identify ways to connect exploitation and exploration activities through solid and broad network ties [15]. Besides a strong network, proactiveness ties are not only a good source of knowledge, but they can also be used by managers as a point of reference in dealing with complex business competition [49]. These ties allow managers or owners of SMEs to carry out exploitation and exploration activities simultaneously [15]. Managers can aggressively discuss their ideas with various partners inside and outside the company to obtain quality feedback regarding the opportunities available for incorporating exploitation and exploration activities. Hence, the relationship between social networks, proactiveness, and ambidexterity was analyzed.

**Hypothesis 1 (H1).** *Social network has a direct impact on ambidexterity.* 

Hypothesis 2 (H2). Proactiveness has an influence between social networks and ambidexterity.

# 2.2. The Relationship of Ambidexterity, Commitment, and Innovation Performance

An extensive managerial network enables and encourages managers to creatively combine expertise to actualize the ambidextrous orientation of SMEs. Ultimately, the expression of that orientation depends on the willingness of top executives to promote and exploit the knowledge and other creative resources derived from their vast network into products, technology, market demand, action, and investment. Recent innovation theories underline agility as the core capability for anticipating and adapting to changes in the business environment and avoiding potential bankruptcy [50,51]. This theory emphasizes

the importance of a proactive managerial attitude in the form of a manager's acuity in responding to new opportunities [52]. As a component of entrepreneurial orientation, a proactive attitude allows top managers to seize market opportunities by taking the initiative and establishing market leadership [53]. SME managers must be highly sensitive to changes in the company and exhibit a proactive attitude by using internal- and external-network sources of information [11]. Managers can expand their exposure by proactively utilizing and examining the knowledge, ideas, and future possibilities identified through strong internal and external networks, thus putting the company in a position to be ambidextrous in its operations [54].

The second management behavior of interest is a commitment to innovation, which is defined as a manager's propensity to dedicate resources and advocate for activities that result in the development of new goods, technologies, and processes that are compatible with market opportunities [29]. This commitment is frequently manifested in the willingness of top executives to invest the company's revenue in innovative products, markets, and technology [55]. As scholars in ambidexterity note, the obstacles to exploitation and exploration include the challenge of integrating paradoxical knowledge while utilizing organizational resources expeditiously. Top management should monitor resource flows to guarantee equitable allocation and should identify additional resources to alleviate tensions between exploitation and exploration; the relative requirements of these activities tend to fluctuate over time [10,11].

Top managers are committed to creating new products and processes and developing and maintaining their firm's ability to assimilate and exploit externally available knowledge. A dedication to innovation enables managers and their organizations to utilize and integrate market insights obtained through collaboration with internal and external stakeholders [56]. By consistently allocating and committing resources to the development of new products, technologies, and innovations, managers establish a reserve of innovative capabilities that can be used when confronted with new opportunities through their networks [57]. A commitment to innovation establishes a foundation for future opportunities. Thus, while a broad network of relationships can bring knowledge and opportunities, only a commitment to innovation demonstrates a manager's willingness to make use of these opportunities to advance the firm's ambidexterity [15].

A strong commitment to innovation is expressed in a managers' willingness to diverge from a specific focus on efficiency and let go of their resistance to novel ways of performing things [15]. By allocating resources to new products, technologies, and markets, top executives provide the firm with alternatives and the accompanying flexibility to serve both existing and new customers and markets. Commitment to innovation counters path dependency and inertia that generally affect the resource allocation process and allow resources to be allocated away from strategic concerns and goals [10]. The authors also report that being proactive contributes more substantially to ambidexterity when top executives commit to continuous dynamic innovation [40].

Some previous studies have shown that ambidexterity is related to the innovation performance of the company, especially SMEs [6,56]. In addition, they suggested that other scholars consider evaluating the complex correlation due to the effect of other factors [6,56]. In fact, the adherence to innovation by top executives places a constraint on the opportunities for ambidexterity available through their extensive networks. Without sufficient investment, managers are unable to convert networking opportunities into action, thus limiting their capacity to pursue an ambitious path [31]. Thus, a lack of commitment to innovation will limit the otherwise powerful and proactive influence on ambidexterity, producing a "ceiling" effect [55]. Consequently, firms are more likely to suffer from concerns of "efficiency domination" in a given period and gravitate toward more definite short-term returns from exploitation [9,10]. Simultaneously, a strong commitment to innovation does not imply that top managers have been proactive—it is often the case that a significant commitment is required to catch up in the marketplace [29]. For example, SMEs that are producing have invested heavily in adapting their product designs to meet market demand and increase sales

to specific consumers [7]. When commitment to innovation is high but managers are not proactive, resources set aside for network-derived opportunities may be unproductive for a more extended period. This results in the firm pursuing less ambidextrous opportunities than would have been possible if managers had been more proactive [15,58].

When managerial commitment to innovation is combined with highly proactive management, a greater association between managerial network extensibility and ambidexterity is inevitable. Top managers are not only quick to seize chances for exploitation and exploration but are also able to consistently exploit these prospects by leveraging the company's technological competencies, which may have been developed through a dedication to innovation [58]. In other words, when a sufficient level of innovation commitment supports proactivity, top executives must be able and prepared to integrate the larger network's resources into ambitious undertakings. The hypotheses for these relationships are as follows:

**Hypothesis 3 (H3).** *Ambidexterity has a direct impact on innovation performance.* 

**Hypothesis 4 (H4).** Commitment to innovation has an influence on the relationship between ambidexterity and innovation performance.

Additionally, the authors would extend by considering the ambidexterity parameter to play a mediation role in the research model, which means there is an indirect correlation between social networks and innovation performance [39,56].

**Hypothesis 5 (H5).** Ambidexterity plays a mediation role in the relationship between social networks and innovation performance.

The existing literature witnesses a lack of studies exploring the relationship between social networks, ambidexterity, and innovation performance [39,56,59]. Notably, considering the moderating effect of the proactiveness and commitment to the innovation of the top managers in these relationships would fill the research gaps theoretically. In addition, examining the research model by conducting it in two different economic contexts also offers several practical insights for other scholars. Hence, the authors proposed the research model (Figure 1).

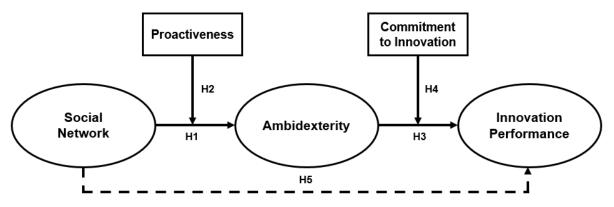


Figure 1. The proposed research model.

## 3. Research Methodology

Based on the proposed research model (Figure 1), there are five key variables, along with 26 items, including social network (n = 5), ambidexterity (n = 8), proactiveness (n = 4), commitment to innovation (n = 5), and innovation performance (n = 4) that were developed (Table A1 in Appendix A). Hence, the authors attempted to collect data from the SMEs of Taiwan and Indonesia through the survey. The respondents were managers and owners of SMEs in the creative industry in both these economies; in detail, 101 respondents were from Indonesia and 123 samples were from Taiwan. The data were gathered using self-reported online and offline questionnaires adapted from previous studies. The details of the respondents' information are listed in Table 1.

**Table 1.** Details of respondent's information.

Calanan	Group -	Indonesia		Taiwan		Total	
Category		Count	%	Count	%	Count	%
Gender	Male	77	76.2%	82	66.7%	159	71.0%
	Female	24	23.8%	41	33.3%	65	29.0%
	under 30	6	5.9%	8	6.5%	14	6.3%
	30–39 years old	15	14.9%	18	14.6%	33	14.7%
Age group	40–49 years old	47	46.5%	38	30.9%	85	37.9%
0 0 1	50–59 years old	25	24.8%	43	35.0%	68	30.4%
	over 60 years old	8	7.9%	16	13.0%	24	10.7%
	Senior High School	5	5.0%	7	5.7%	12	5.4%
Educational	Bachelor Graduates	57	56.4%	40	32.5%	97	43.3%
background	Master Graduates	37	36.6%	57	46.3%	94	42.0%
O	<b>Doctoral Graduates</b>	2	2.0%	19	15.4%	21	9.4%
	Advertising	10	9.9%	4	3.3%	14	6.3%
	Application and game	3	3.0%	9	7.3%	12	5.4%
	Architecture	3	3.0%	4	3.3%	7	3.1%
	Craft	1	1.0%	2	1.6%	3	1.3%
Industry	Culinary	9	8.9%	6	4.9%	15	6.7%
,	Interior design	1	1.0%	1	0.8%	2	0.9%
	Others	47	46.5%	66	53.7%	113	50.4%
	Product design	24	23.8%	27	22.0%	51	22.8%
	Publishing	1	1.0%	2	1.6%	3	1.3%
	Less than 3 years	32	31.7%	25	20.3%	57	25.4%
Years of	3–5 years	18	17.8%	19	15.4%	37	16.5%
operating	6–10 years	10	9.9%	8	6.5%	18	8.0%
	More than 10 years	41	40.6%	71	57.7%	112	50.0%
Number of employees	Less than 5 employees	28	27.7%	51	41.5%	79	35.3%
	6–10 employees	29	28.7%	22	17.9%	51	22.8%
	11–30 employees	22	21.8%	26	21.1%	48	21.4%
	31–50 employees	9	8.9%	9	7.3%	18	8.0%
	More than 50 employees	13	12.9%	15	12.2%	28	12.5%
Average annual revenue	Less than USD 3000	14	13.9%	16	13.0%	30	13.4%
	USD 3001-10,000	10	9.9%	9	7.3%	19	8.5%
	USD 10,001-30,000	10	9.9%	12	9.8%	22	9.8%
	USD 30,000-100,000	23	22.8%	24	19.5%	47	21.0%
	USD 100,001-300,000	39	38.6%	24	19.5%	63	28.1%
	More than USD 300,000	5	5.0%	38	30.9%	43	19.2%

The authors considered the following five key variables: social network (SN), proactiveness (PRO), ambidexterity (AMB), commitment to innovation (CI), and innovation performance (IP). All constructs of the questionnaire were measured by the five-point Likert scale (from strongly disagree to strongly agree). The analysis was conducted using the PLS-SEM technique, conducted by the Smart-PLS software version 3.3.6: Hamburg, Germany. The PLS-SEM approach has been widely applied to examine the proposed model's effectiveness, especially with a small quantity of samples [60]. Aiming to examine the difference between Indonesia's and Taiwan's SMEs through the same research model, the Multiple Group Analysis (MGA) technique has been suggested as a suitable method for exploring the relationships among complex factors [61,62].

#### 4. Results and Discussion

Before assessing the multiple group analysis, this study particularly aimed to evaluate the economic context. The authors determined the reliability and validity of the variable's measures. Two essential values, composite reliability (CR) and average variance extracted (AVE), played an important role in the measurement validity of constructs [22,60]. Con-

sequently, the analysis results explored three items, SN2, IP4, and IP4, that have been discarded due to their outer loading values being lower than the 0.708 cut-off [60]. In addition, all five constructs had values higher than the suggested threshold level (AVE > 0.4 and CR > 0.7) [60,63], meaning sufficient convergent validity for the next stage. Thus, the MGA was conducted with five key constructs and 23 items involved.

The independent variable affects the dependent variable if the value of sig. < 0.05 or the t-statistics > t-table. The original sample shows the magnitude of the influence of the independent variable on the dependent variable. Negative and positive values explain the direction of the influence rather than the extent of that influence. As seen in Table 2, all effects have a value of sig. < 0.05, and the magnitude of the effect is positive, which means it has a positive effect.

Table 2. Direct effect test results.

Relationships	Original Sample (O)	T Statistics ( O/STDEV )	p Values	Results
Social network => ambidexterity	0.189	3.041	0.003	H1 accepted
Moderating effect (SNxPRO) => ambidexterity	0.126	2.040	0.042	H2 accepted
Ambidexterity => innovation performance	0.306	5.065	0.000	H3 accepted
Moderating effect (AMBxCI) => innovation performance	0.134	2.270	0.024	H4 accepted

If the p-value < 0.05, then the authors concluded that there are differences between Indonesia and Taiwan in the influence of ambidexterity on innovation performance. The ambidexterity coefficient in influencing innovation performance for the Indonesian sample (0.479 > 0.175) was greater than that for the sample for Taiwan. However, there is no difference between the two samples in the impact of social networks on ambidexterity and the moderating function of proactiveness and commitment to innovation.

Compared to the sample from Taiwan, the Indonesian SEM sample exhibited greater ambidexterity, commitment to innovation, and innovation performance. Therefore, Hypothesis 5 can be accepted (Table 3); thus, there is a difference between the samples from Indonesia and Taiwan in innovation performance.

Table 3. Indirect effect test results.

Relationships	Original Sample (O)	T Statistics ( O/STDEV )	p Values	Results
Social network => ambidexterity => innovation performance	0.058	2.395	0.017	H5 accepted

# 4.1. The Correlation between Social Network and Ambidexterity

The social network theory explains the relationship between innovation and the network used by individuals in accessing resources, knowledge, and information [58]. Social networks positively influence a company's exploration and exploitation process [40,64]. The success of an innovation process is related to the manager's ability to collect and process information [65]. A manager is expected to maintain existing relationships and build new relationships [2,13]. The existence of ties between managers and other parties allows for communication channels to be established between them. In the communication process, each party is assumed to have knowledge and expertise that can be shared [6]. The hope is that their interaction results in the process of exchanging knowledge and expertise that can help create new knowledge for innovation.

## 4.2. Proactiveness, Social Network, and Ambidexterity

Proactive managers are those who take the initiative and have an active approach to monitoring market trends, seizing opportunities, and identifying challenges to ensure that the organization remains competitive in the market [18]. Recent innovation theory underscores agility as a core ability for companies wanting to anticipate and adapt to changes and possible bankruptcy in the business environment through the proactive behavior of managers [50–52]. Managers need to be sensitive to changes within the organization and the environment and must exhibit a proactive attitude by seeking and utilizing information obtained from internal and external networks. This attitude facilitates organizations meeting their knowledge needs in relation to developing or finding solutions for the problems they face [50]. A proactive attitude helps managers make maximum use of their network to gather information and knowledge and support the exploration and exploitation needs of the organization [51].

#### 4.3. The Correlation between Ambidexterity and Innovation Performance

Innovation performance describes the organization's ability to express new ideas as inputs and turn them into results or outputs and to manifest its innovation capabilities and efforts through implementation in the market [66]. To do this, companies must have specific knowledge and skills related to their unique resources and advantages. Ambidextrous behavior facilitates the process of exploitation and exploration of the organization's resources and knowledge to generate new ideas or breakthroughs. According to Vaccaro et al. (2012), the ability to exploit ambidexterity describes the extent to which organizations can gather existing resources and knowledge to innovate and meet consumer needs [42].

Exploration describes how an organization can explore the knowledge necessary to pursue the innovation needed to reach new customers and enter emerging markets [1]. In other words, exploitation concerns efforts to expand current knowledge for incremental innovation and exploration and to then develop new knowledge and encourage radical company innovation [66]. In this research, these results supported the findings of previous studies regarding the need for the mastery of ambidexterity in the innovation-creation process (presented in Table 4) [43,59,61].

Relationships	Country	Original Sample (O)	T-Values	<i>p</i> -Values	PLS-MGA
Social network => ambidexterity	Indonesia Taiwan	0.402 0.130	3.418 1.622	0.001 0.106	0.054
Moderating effect (SNxPRO) => ambidexterity	Indonesia Taiwan	0.071 0.118	0.810 1.393	0.419 0.165	0.661
Ambidexterity => innovation performance	Indonesia Taiwan	0.479 0.175	3.754 2.578	0.000 0.010	0.049
Moderating effect (AMBxCI) => innovation performance	Indonesia Taiwan	0.047 0.086	0.454 1.196	0.650 0.233	0.748

Table 4. Multiple group analysis results.

#### 4.4. Commitment to Innovation, Ambidexterity, and Innovation Performance

Commitment to innovation can provide managers and companies with technological readiness that allows them to exploit and transform existing market-related knowledge [29]. Commitment to innovation describes the extent to which managers are willing to allocate resources and activities to develop new products, technologies, and processes consistent with market opportunities [29]. It can assist managers in responding to the main challenge of ambidexterity, namely coordinating and combining knowledge from different sources, while allocating company resources appropriately [6]. Therefore, only managers who have a solid commitment to innovation can facilitate their organizations' exploitation and exploration activities to produce creative ideas and innovative outputs to meet customer needs [29,58].

# 4.5. Social Network, Ambidexterity, and Innovation Performance

Our results show the mediating effect of ambidexterity in the relationship between social networks and innovation performance. They show that there are stages in realizing organizational innovation performance from social networks. Social networks provide several channels for information and knowledge and, in this sense, can be seen as capital for managers to use in increasing the ambidextrous behavior of the company. The information and knowledge collected then become capital for managers to exploit in the process of achieving ambidexterity. Ambidextrous behavior is the main factor driving improved innovation.

### 4.6. Differences in Constructs between Indonesia and Taiwan

The authors surveyed the SMEs in both Indonesia and Taiwan. The results of the study highlighted that the innovation performance model with ambidexterity, social network, proactiveness, and commitment to innovation as variables was equally significant in Indonesia and Taiwan. In general, the model supports improving innovation performance for SMEs in both Taiwan and Indonesia. Furthermore, thanks to the Likert scale and the respondent's perspectives, the mean values of these primary constructs were evaluated. The data processing results from the collected samples also indicated that SMEs in Indonesia showed significantly greater ambidexterity, commitment to innovation, and innovation performance than their counterparts in Taiwan. Meanwhile, the rest of these constructs, including social network and proactiveness, indicated a negligible difference between the two economies (See Table 5).

Variables	Country	N	Mean	Std. Deviation	Std. Error Mean
SN	Indonesia	101	4.4282	0.49917	0.04967
	Taiwan	123	4.4167	0.46569	0.04199
PRO	Indonesia	101	3.9752	0.64081	0.06376
	Taiwan	123	4.0589	0.58155	0.05244
AMB	Indonesia	101	4.3055	0.40458	0.04026
	Taiwan	123	4.0848	0.45465	0.04099
CI	Indonesia	101	4.3822	0.69805	0.06946
	Taiwan	123	3.2911	0.50781	0.04579
IP	Indonesia	101	4.1023	0.57105	0.05682
	Taiwan	123	3.6098	0.44702	0.04031

**Table 5.** Group statistical analysis.

#### 5. Conclusions

Based on the research results, the authors provided several insightful contributions in both aspects as theoretical and practical. Firstly, the proposed research model has enriched theories regarding the relationship between social networks, ambidexterity, and innovation performance. In addition, the complex correlation also identified the moderator role of two key factors, the proactiveness and the commitment to innovation of the top managers. Secondly, this manuscript mentioned some practical implications, especially that the proposed model has been tested in the real world. Consequently, the study results supported the overall hypotheses that (1) social networks have a positive effect on ambidexterity, (2) proactiveness moderates the relationship between social networks and ambidexterity, (3) ambidexterity has a positive effect on innovation performance, (4) commitment to innovation moderates the relationship between ambidexterity and innovation performance, and (5) ambidexterity mediates the relationship between social networks and innovation performance. In addition to these, there is: (6) there are differences in the construct of innovation performance between Indonesia and Taiwan. Regarding the differences between Indonesia and Taiwan in the construct of innovation performance, ambidexterity had a more significant influence on innovation performance in Indonesia

than in Taiwan. However, there is no difference between the samples from Indonesia and Taiwan regarding the impact of social networks on ambidexterity and the moderating function of proactiveness and commitment to innovation. Second, the results showed that Indonesian SMEs have greater ambidexterity, commitment to innovation, and innovation performance than their counterparts in Taiwan. It can be concluded that businesses in Indonesia's creative sector depend heavily on innovation; the sector in Indonesia is a significant one, especially in tourist areas, and in production, product development, and design, they rely heavily on the creative-thinking skills of managers and workers. Thus, innovation initiatives are essential in developing the market reach of SMEs to increase production efficiency and effectiveness.

The results of this study expand studies of organizational innovation and ambidexterity and contribute empirical data concerning the application of these constructs to SMEs in both Indonesia and Taiwan. Regarding SME practitioners, the results of this study can be used to develop strategies to improve organizational innovation capabilities. The top managers are responsible for improving the quality of knowledge dissemination within the organization regarding the company's unique resources and competencies so that they can determine the best way to exploit their assets [14]. Therefore, managers are vital in encouraging organizational innovation performance by being proactive in relation to external environmental changes, improving internal and external social relations [64,65], supporting exploitation and knowledge-exploration behavior within the organization, and showing a high commitment to innovation.

Considering the cross economy context to explore the interrelation association (social networks => ambidexterity => innovation performance), this manuscript is considered as a unique empirical study so far. However, it indicated that limitations still exist that provide some research ideas for other studies in the future. Firstly, this study focused on the role of managers/owners in the organization's orientation and innovation by considering the magnitude of their influence on SMEs, and it was particularly limited to the creative industry in Indonesia and Taiwan. In addition, the authors did not evaluate the impact of country conditions as the control variable. This is the limitation of the research that could be considered in other studies. Thereby, the authors hope this proposed model could be expanded in other conditions, such as the national or sector context, and by considering relevant factors belonging to the national context as a control variable. Secondly, the variables that served as moderators were internal management factors such as a proactive attitude and commitment to innovation. Further research could consider factors external to managers and organizations in considering ambidextrous behavior and innovation performance in SMEs, particularly considering that SMEs are heavily influenced by external factors such as government policies, market competition, and technological developments. In addition, further research could assess the quality of communication by managers in their internal and external social relationships to predict the quality of existing knowledge and information exchange.

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# Appendix A

**Table A1.** Measurement of key variables.

Construct	Items	Resource
Social Network (SN)	SN1: As owner/manager, I keep regular communication with my employees.  SN2: As owner/manager, I keep regular communication with my customers.  SN3: As owner/manager, I keep regular communication with my suppliers.  SN4: As owner/manager, I keep regular communication with my distributors.  SN5: As owner/manager, I keep regular communication with external parties who are interested in my business.	[14,15,64]
Ambidexterity (AMB)	AMB1: Our company accepts demands that go beyond existing products and services.  AMB2: We commercialize products and services that are completely new to our company.  AMB3: We frequently utilize new opportunities in new markets.  AMB4: Our company regularly uses new distribution.  AMB5: We frequently make small adjustments to our products and services.  AMB6: We improve our provision's efficiency of products and services.  AMB7: We increase economies of scale in existing markets.  AMB8: Our company expands services for existing clients.  AMB1: Our company accepts demands that go beyond existing products and services.	[6,15,58]
Proactiveness (PRO)	PRO1: Our company performs business forecasts to avoid uncertain. PRO2: Our company/organization considers it important to be prepared for future unforeseen events. PRO3: Our company is engaged in financial modeling to prepare for the future. PRO4: Our company actively monitors external factors that affect our organization development.	[15,51,54]
Commitment toInnovation (CI)	CI1: Our company believes that finding new ideas and methods for our business is an important key to success.  CI2: Our company supports employees to take initiatives in creating new ideas.  CI3: Our employees are able to transform information from internal and external sources into valuable knowledge for our company.  CI4: Our company encourages the collaboration and exchange of ideas between the departments in order to produce new approaches.  CI5: Our company tries out new ideas and methods to provide innovative solutions to our clients' problems.	[15,29]
Innovation Performance (IP)	IP1: Our company applies innovation in the production process. IP2: Our company uses the latest technology to develop new products. IP3: Our company is better than other companies in terms of product development. IP4: Our company has successfully marketed new innovative products.	[7,33,34]

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