



## TMT's SOCIAL CAPITAL AND FIRM PERFORMANCE: DO TMT's NETWORK MATTER?

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### Abstract

The firm needs getting information efficiency and effectiveness of resource access. Top Management Team (TMT) as part of governance have different role depending on firm performance. According to social capital theory, social capital can refer to company assets in the form of a network that contains information, trust and norms. TMT's social capital explored for improving firm performance through joining the same network of experience, personality, and management style. Those are beneficial for social and economic exchange as a source of company excellence and competitive performance. External parties' trust attached to the network, followed by the top management team. The amount of trust that is getting bigger, broader, and weighted will show the increasing network quality of the senior management team in providing benefits for the contribution of increasing company performance. Measuring social capital effectiveness determines the magnitude of the increase in company performance. The social capital new measurements exploration needed to be able to represent the component of social capital.

We develop the new measurement of TMT's network for showing the importance of quality network as a proxy of social capital in improving firm performance. The study explores data from Indonesia's manufacture industry in the period 2008-2017, and we analysis TMT's network from 108 firms. The delisting, relisting, mergers or acquisitions firm excluded from samples and accurately, we use dynamic panel data regressions for test the hypotheses.

The result shows that TMT's network as a proxy of social capital matters as the determinant of firm performance. TMT's social capital has a significant positive impact on Tobin's Q, but contrast negative of return on equity. Another finding shows our new measurement of the network be a practical approach for explaining relationship TMT's social capital and market performance. We also find the firm size and foreign interest as potential control variables. Generally, all findings show the critical role of TMT's network for changing firm's policy about the quality network of TMT in the organization, as well as it need be a concern for the investor in determining of investment choice.

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## 1. Introduction

The crisis has an impact on the world economic slowdown and affects a large number of distressed and bankrupted firm because of a drastic decline in production capacity. It becomes financial researchers concern developing a determinant model of firm performance to anticipate it. The study of the Asian Development Bank (ADB) identifies main contributors to the economic crisis in Asian countries is weak corporate governance (Zhuang et al., 2000). Furthermore, it has known that firm's poor internal management make deterioration of organizational performance. Francis et al., (2012) find many survived firm during a crisis period place substantial emphasis on corporate governance such as ownership, diversification and management ownership concentration, including its impact on corporate performance. Encourage the urgency of corporate governance reform in various countries.

Corporate governance is a process in which a company directed and controlled. Through the governance model, the framework and decision-making process designed so that corporation can grow and survive in their environment. However, the governance model requires dynamic supporting of the governance system that includes the active involvement of the entire organization (board, executive management, and employees). Corporate governance has an internal mechanism, and corporate boards are the central part that functions to monitor and advise management to protect the interests of shareholders both in standard economic times and crises (Adams & Ferreira, 2007). The role of boards can differ depending on the economic conditions and the performance of the company faced. Normal economic conditions will encourage increased company performance, so boards tend to be reactive and reduce their independence. Conversely, when the financial crisis and resulting decline in firm performance will make boards more proactive and independent as a result of reduced negotiation capabilities.

The information flow of networks between firms is external support for improving its performance (Huse et al., 2011) and TMT's network become one of the critical key getting firm source access more leisurely and competitively in industry. Upper echelon theory assumes that what is on boards of top management will show the achievement of the company (Hambrick and Mason, 1984). It is in line with the behavioural argument of corporate finance theory which states that companies filter naturally in many ways including optimization of contracts by boards through the suitability of business partners' experiences, personalities and styles of management with the challenges faced by companies (Adler, 2004). It intended that companies achieve information efficiency and effectiveness of resource access in the market. Therefore, boards tend to network or join a network that has the same experience, personality, and management style as each of its members. The similarity of norms and values of the network according to the social capital theory that TMT's social capital can be explored in terms of the benefits and costs it generates to improve firm performance. Social capital facilitates learning and learning abilities through current conditions under the process of exchange and combination of knowledge (Nahapiet & Ghoshal 1998). Personal relationships between individuals in a regional or industrial area can help build formal relationships between businesses so that strong networks expand and this is what becomes a source of variation in the acquisition of competitive capabilities.

The relationship of social capital and firm performance has widely investigated, and the results are diverse, namely negative significant (Young, 2005; Castro and Bueno, 2016), positive significant (Lin and Shih, 2008; Tian et al., 2011; Saha and Banerjee, 2015) also found not to affect (Acquaah, 2007; Augusto, 2014). Differences in the findings are made possible by different social capital proxies due to various theoretical approaches, as well as allegations of factors that can strengthen or weaken the relationship between social capital and company performance.

Measurement of social capital is still essential explored because its variety shows the difference in its effect on company performance. The social capital proxy effectiveness determines performance, and this study explores explicitly a new measurement of TMT's network as a proxy of social capital for achieving efficiency performance as suggested by Payne et al. (2011). This research expected to contribute to expanding the literature on empirical evidence regarding the role of TMT's network as social capital's proxy on firm performance. Besides, exploration literature about the measurement of social capital can make firm has considered it to strengthen performance by an effective quality network of TMT. Firms will have more flexibility to manage the composition diversity of TMT's network according to the firm's external environmental conditions.

To facilitate the explanation, the systematics of this paper will divide into several parts, namely the first is the introduction, the two-review literature, the three methodologies, the fourth results and discussion, then last the conclusion.

## 2. Literature Review

### Corporate Governance, Top Management Team, and Social Capital

Corporate governance is an essential aspect for survival firm both in crisis and reasonable condition. The company needs the active and dynamic involvement of the entire organization, such as board, executive management, and employees within the governance model to achieve optimal performance. Developing corporate performance models, especially those associated with the board's role, become urgency in finance researchers. Although various theories can explain the function of top leaders as strategic human, the direction of the latest researches shows that board behaviour is associated with firm performance. It based on the reason that TMT is a significant part of governance that can affect firm performance (Francis et al., 2012). TMT can contribute to providing accessible information and resources accessible for the firm through their expertise and ability.

TMT as *strategic human capital* needs to combine with the network so that company can create new resources (Blyler & Coff 2003). The firm requires some numbers and strategical networks for achieving optimal performance. It based on the logic of thinking that trust forms the basis of social networks, and simultaneously social networks are tools for establishing trust (Meldaner and Nordqvist, 2001). With that trust, the firm could maintain the sustainability of resources for its operational activities.

Social capital as a firm asset is attached to TMT in external network form that owned by them. TMT in communities with sizeable social capital have more access to information and resources for their company's competitive advantage. It based on the argument that many TMT's networks will give more experiences for finding the self-confidence then TMT being able to make better changes to the firm's position in the industry through their social capital.

In a review of several social capital kinds of literature, it argued that the concept of social capital refers to information, beliefs, and norms that reflected in a social network in which social networks are real relationships between groups or individuals (Ferris et al., 2017). The main component of social capital is trust and a growing social network. It based on the logic of thinking that trust forms the basis of social networks, and simultaneously social networks are tools for establishing trust (Meldaner and Nordqvist, 2001).

Since trust and social networks created in social communities through processes of interaction and learning, they accumulate different levels of social capital. Cities with sizeable social capital look superior to economic systems (business transactions) starting from relationships with suppliers to strategic alliances. Social capital reduces transaction costs because social networks intended for this trust helps the company in terms of coordination. Changes in the dominance of managerial trust can occur when the accumulation of social learning processes focused on formalized economic networks (Melander and

Nordqvist, 2001). A high level of trust and extensive social networks show that social capital can boost financial capacity for the community within it.

Therefore, networking and trust as components of social capital should use as economic assets. Firms in communities with sizeable social capital always have a competitive advantage to expand their social capital to reduce irregularities, reliability of the information, and long-term negotiations. Networks on relationships that formed between individuals, groups, and organizations are dynamic organizational entities and allow the complexity of social and economic reality. Some companies with multiple networks will experience in finding changes in trust centred on change and social capital in the industry (Meldaner & Nordqvist, 2001).

### **Social Capital and Firm Performance**

Improved corporate board performance will improve company performance because manager supervision becomes more active than previously. Thus, reducing agency costs arising from shareholder ownership and managerial control (Mahdia et al., 2012). The individual characteristics of top management have an impact on strategic actions connected with company performance (Hambrick & Mason, 1984). Consequently, company performance can explain by the diversity of characteristics of top management team members (Finkelstein & Hambrick, 1990, in Homberg & Bui, 2013)

Social capital compares the existence and opportunities of all available resources through membership of a network (Nahapiet and Ghosal, 1998). Social capital resources are available for companies that tend to want differences in business performance. Through social capital, more open access to intellectual, financial, and cultural capital is crucial to ensure the efficiency of business performance (Bourdieu, 1985). Then to facilitating access to vital capital resources for the company, this also acts as complementary capital or a substitute for the company. Then it compensates for limited access to resources through its network and ensures financial and intellectual efficiency through reducing transaction costs and knowledge sharing. Therefore, this is an efficient capital to guarantee a sustainable competitive advantage for the company's business.

### **TMT's Social Capital and Firm Performance**

The decision-maker positioned the top management team (TMT) strategically. Moreover, this based on the priority of the composition of the director. It is because it bridges corporate owners and managers, and helps the company's relationship with other companies. All of these relationships are a significant reflection of organizational behaviour (Mahdia et al., 2012). Expanding corporate value through governance performance can be achieved by managing the business performance of the top management team through the diversity of experience, education, gender, age, and business abilities (Cooper 1992 in Braami & Peeters, 2017). The business ability of TMT will develop and be strategic when accompanied by social capital.

Social capital is inherent in relationships in individual or group networks as a source of excellence and competitive performance of the organization. The behavioural perspective views the social capital owned by TMT as an essential element that needs to be understood.

Meldaner and Nordqvist (2001) state that the main components of social capital are trust and social networks that develop. It based on the logic of thinking that trust forms the basis of a system, and at the same time, the trust forms. Besides, Villiers et al. (2011) emphasize that board knowledge created from various relationships between boards including environmental crises that have an impact on stakeholders, the company's reputation, and the company's financial performance. It has been in a large social capital community can have a competitive advantage. Companies with many networks will have greater trust to make strategic changes in the industry (Meldaner & Nordqvist, 2001).

Previous TMT's research tends using one or two approaches and theories dominated in agency theory which emphasized the role and general function of TMT as executor of company activities. Based on the inconsistencies of research results on social capital and firm performance, a more in-depth examination of social capital role to firm performance is needed. Besides, the focus of exploration lies in social capital as part of the useful purpose of TMT for providing benefit to the firm. This study focuses on *corporate board* as group or team so that individuals have multiple perspectives in which knowledge and connection used collectively, as suggested by Payne et al. (2011). Through *upper echelon theory* and *social capital theory*, this research clarifies the role of TMT on firm performance using previous empirical results and then develop the new measurement of the network as a proxy of social capital as quality network approach for better describing of its.

Upper Echelon Theory approach assumes that what is in top management will show the achievement of firm performance. Moreover, a critical to note for TMT because they are business people in the corporate governance structure that can have a significant impact on the company through attitude and their behaviour (Hambrick and Mason, 1984). The companies filter naturally in many ways, including conclusions and decisions when faced with a situation of uncertainty. It is in line with social capital theory, arguing that social networks are essential for business people used to optimize firm performance.

According to Nahapiet and Ghoshal (1998), social capital has the opportunity to provide information efficiency and ease of access of resources in the market because social capital facilitates learning and learning skills through adequate conditions under the process of exchange and combination of knowledge. It makes the company able to absorb and apply new knowledge for commercial interests, not only through individuals but also information that comes from social relations and the values that are in it. Furthermore, companies can create new resources through human capital learning, and organizations become more valuable than the previous. However, firm human capital becomes essential when combined with social networks to create new resources (Blyler & Coff, 2003).

A developing social network is a tool for building trust. It is possible because the director's knowledge that formed from various relationships between individuals or other groups will have an impact on stakeholders, the company's reputation, and the company's financial performance. The firm that has many networks become experienced in finding changes in trust in the industry, and then with sizeable social capital can have a competitive advantage (Villiers, 2011). TMT's social capital of the firm becomes vital for improving company performance. Shaw et al. (2005) found that Organization performance decreases impacted the loss of social capital as human resources turnovers. Also, Lin, H.C., Shih, C.T., 2008, stated that the social integration of TMT has a positive relation to firm performance. Furthermore, Saha and Banerjee (2015) state that network ties, trust, and shared vision as social capital proxies have a positive impact on firm performance. Social capital by network members have a positive effect on the firm's risk-taking (Ferris et al., 2017)

The previous researches show that social capital research leads to board social capital or managerial group than organization social capital. Research results focusing on board members show inconsistencies finding of social capital influence firm performance. The exploring of onboard research behaviour requires the necessary theory extension. Financial crisis encourages rethinking about management and corporate governance to look for its paradigm's alternative. The firm's creation and sustainability are essential and primary in industrial economic development.

The development of a firm performance determinant model is urgent for corporate finance researchers. Repeated global crisis events have focused the focus on finding the detection of performance degradation factors to minimize the possible risks faced by the company. The finding of Milton (2002) which states that corporate governance is the initial determinant of performance in times of crisis, makes companies able to perform management



reliably and reduce crisis risk through optimizing the role of TMT in good corporate governance to protect shareholder interests.

TMT is an essential strategic human capital to be combined with social networks so that companies can create new resources (Blyler & Coff 2003). Social relations networks are social capital that functions as valuable resources and can direct the firm to exchange economic values, and then be able to produce collective assets that benefit individuals and communities. Network and trust as components of social capital should use as financial assets. The firm expected to be able to absorb and apply new knowledge for commercial interests not only through individuals but also information originating from social relations and the values contained within it. Thus, the firm can create new intellectual capital (Nahapiet & Ghoshal, 1998).

However, corporate boards improvise corporate governance for firm performance optimization. Boards structure depends on the firm's operation complexity, the size and composition of boards determined by business-specific and firm's operational information. (Boone et al., 2007).

### **TMT's Network as Social Capital Measurement**

As Hambrick and Mason (1984) have argued in *the upper echelons' perspective*, the network is the relationship formed between individuals, groups, and organizations. The networks owned by TMT can determine firm performance. TMT's diversity has the potential to be moderation the effect TMT and firm performance. Experience and background of TMT such *age, gender, educational attainment* can influence to firm's strategic direction TMT as a valuable resource can become more skilled in their field and able to be the director for a long time. Therefore, TMT needs to have more social capital, so that have capabilities for providing advice, information, and better access to the firm's resources to achieving of firm's competitive advantage.

Differences of social capital proxies allow unsafe finding results of TMT's role in firm performance. More in-depth exploration in the accuracy of social capital proxy becomes urgent examined through a series of TMT's studies. Thus, the consistency of research results can use as a reference for companies to consider the aspects of TMT needed to improve performance as a competitive advantage in their industry environment.

The effectiveness of measuring social capital determines the magnitude of the increase in company performance. Exploration of new measures of social capital is needed to be able to represent this component. This study also emphasizes the social capital new standard formation, which carried out by developing a social capital model of Young (2005). This new measurement of the network as the social capital proxy is called Network Average (NA) which formed by granting scale weights to network size, network prominence, and network position as TMT's network quality. It did with the hope that a more relevant social capital measure will obtain based on Young's (2005) suggestion. Which states that social capital should reflect overall what has known by TMT and not merely TMT identity, but also constitutes social interaction, trust, and shared vision as a statement of Saha and Banerjee (2015). External parties' trust is attached to the network, followed by TMT. The amount of trust that is getting bigger, broader, and weighted will show the increasing network quality of the top management team in providing benefits for the contribution of increasing company performance.

The Network Average (NA) obtained from the total multiplication: the number, quality, and position of each TMT's member involved. It weighted by each of their predictors who are. Then it divided by the number of TMT's members and the network size measured by each network team member. The prominence calculated based on the extent of TMT's network and then network position saw from its place inside. Specifically, the TMT's Network Average (NA) formula is as below:

$$\frac{(TMT's \text{ Network size}_{j,t}) + (TMT's \text{ Network prominence}_{j,t} \times \text{weight}) + (TMT's \text{ Network position}_{j,t} \times \text{weight})}{(\text{Number of TMT}_{i,t})}$$

Source: developed from Young (2005)

*TMT's network size<sub>j,t</sub>* is the network number of TMT's member, meanwhile *TMT's network prominence<sub>s, it</sub>* is the network quality of TMT's members that are valued at high weights as network coverage becomes more comprehensive than the previous. Then *TMT's network position<sub>it</sub>* shows the position of members in the network that the more senior the importance when the area of TMT's members is getting higher in the network.

Network Average (NA) is a breakthrough measurement of social capital that reflects the network quality of TMT. Membership of TMT to a network is useful for social and economic exchange as a source of company excellence and competitive performance. The more extensive and broader information, trust and norms will make firm easier to access the economic resources needed. Besides, through network ownership with other companies or organizations also increases the ability, skills, and knowledge of TMT. The strategy and responsiveness used a depth of analysis for the accuracy of the company's strategy in its industry.

### 3. Data and Methodology

This paper explores data from manufacturing industry companies listed on the Indonesia Stock Exchange in 2008-2017 such data of TMT members, consisting of president director and other directors who are on directors' boards of firm manufacturing. The sample selected by specific criteria consisted of primary chemical industry sector, various industrial sector companies, and consumer goods industry companies. As for delisting, relisting, moving other areas, mergers or acquisitions excluded from the sample.

The dependent variable firm performance is measured by Return on Equity and Tobin's Q to describe the managerial performance of TMT. Tobin's Q measurement followed Black et al. (2006), which calculated from the market value of assets as the book value of debt + book value of preferred stock + market value of common stock/book value of the asset. Independent variable social capital proxied by external TMT network and the study develop dimensional operationalization of its from Young (2005) named Network Average (NA). We count network size, network prominence and network position of each firm's TMT and provide a specific scale and averaged so that it reflects the firm's social capital in a year. The model controlled by firm size uses Ln Asset, firm age for firm age, and foreign interest measured by the percentage of share ownership by foreign investors, while board size is the number of TMT members in each firm.

We propose the hypothesis that social capital of TMT have a positive impact on firm performance and test it with the dynamic panel. The model expressed as follows:

$$PRFORM_{i,t} = \beta_0 + \phi PRFORM_{i,t-1} + \beta_1 SC_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 AGE_{i,t} + \beta_4 FORIST_{i,t} + \beta_5 BRDSZE_{i,t} + \varepsilon_{i,t}$$

PRFORM is the firm performance (ROE; Tobin's q), and  $\phi PRFORM$  is performance lag. SC is the social capital proxied by Network Average (NA) of TMT, SIZE measured by company size (Ln Asset), AGE is company age, FORIST is the share percentage of foreign ownership and BRDSZE measured by the number of TMT members.

### 4. Results and Discussion

Table 1. present the detail reviews of the cross-industry distribution of the external network. We observe 5312 data of TMT during 2008-2017 from 108 firms of Indonesia manufacture. Detailed TMT descriptive data in the Indonesian manufacturing industry shows a minimum number of TMT members is three and a maximum of 11 with 50% (9/18) of TMT has at least one membership in external network with other firm or organizations. The value of the highest number of networks in the electronics industry and this allows the

formation of high social capital values as well. The need for industrial innovation to remain viable and competitive due to high consumer demand, makes firms need to have greater access to information and economic resources. TMT, which has more networks, will provide opportunities for the firm to respond faster than their competitors.

**Table 1. Industry Distribution of Firm and TMT's Network**

Industry	Number of firms on IDX 2008-2017	Average Board Size	Number of TMT's network	Average of TMT's network prominence	Average of TMT's network position	TMT's Social Capital
Cement	3	8	0.251082	2.701754	2.350877	1.4
Ceramics, Glass, Porcelain	6	11	1.181818	2.565217	2.130435	0.3
Metal and Allied Product	11	3	3.413793	2.576087	2.554348	0.7
Chemicals	8	5	1	5	1	0.0
Plastics and Packaging	8	4	1	2.777778	2.777778	0.1
Animal Feed	4	7	3.7	3.135135	2.297297	1.0
Wood Industries	2	3	4	2	1	0.0
Pulp and Paper	6	5	1	3.5	1.5	0.0
Automotive & Components	12	8	2.806122	3.11811	1.429134	1.3
Textile, garment	12	6	2.913793	2.346154	1.423077	1.7
Footwear	2	6	1	5	1	0.5
Cable	6	6	-	-	-	0.0
Electronics	1	3	3.545455	1.222222	2.138889	5.2
Food and Beverage	11	4	2.837209	2.247863	1.880342	0.7
Tobacco	3	8	1	4	2	0.1
Pharmaceuticals	7	7	1.792453	2.404762	1.607143	0.9
Cosmetics and household	3	4	1	2.404762	1.607143	1.9
Houseware	3	3	-	-	-	0.0
Mean	-	6	0,971	2,623	1,808	0,8
Modus	-	3	1	2	1	

SC is social capital; network size is the number of networks owned by TMT. Network prominence is the extent of the network that TMT follows with a weight of 1 = local, 2 = domestic, 3 = regional, 4 = Asia, 5 = global; network position, that is, the position of the TMT in the network followed by a weight of 1 = member, 2 = deputy chairman/secretary, 3 = Chair. Board Size is the number of TMT members in the company.

For the breadth of network area, only 27% (5/18) of the TMT's in the Indonesian manufacturing industry has a regional network and a few that are a global network, namely the Chemical and footwear industry. It reflects the need for the two sectors for broader access to the information given the industry regulations and market share. The TMT position of the Indonesian manufacturing industry on the network is average as a member, and a small portion of deputy members/secretaries based on an average value of 1.8.

**Table 2. Results of regression and robust test analysis**

Variable	Dependent variable: Tobins'q		Dependent variable: ROE	
	Research model	Robust model	Research model	Robust model
<i>Lag performance</i>	0,6703* (0,0239)	0,6203* (0,0284)	0,5024* (0,0003)	0,3833* (0,0026)
<i>TMT Social capital measures</i>				
Network Average (NA) – SC	0,0887* (0,0215)		0,2815* (0,0186)	
Network size		0,3854** (0,1689)		-0,9143* (0,7215)
Network prominence		-0,0133 (0,0308)		5,2033* (0,7215)
Network position		-0,2621** (0,1320)		-149,144* (1,7032)
<i>Firm-specific controls</i>				
Firm Size – SIZE	-0,1967*	-0,1409*	-11,917*	-13,261*



	(0,0386)	(0,0439)	(0,0259)	(0,6609)
Firm Age – AGE	0,0285*	0,0249*	0,5929*	-3,1776*
	(0,0045)	(0,0061)	0,0169	(0,2269)
Foreign interest – FORIST	0,4063*	0,4376*	-0,5261**	-4,8127*
	(0,0846)	(0,0758)	0,2509	1,3546
Board size – BRDSZE	0,4458*	0,0587	-24,255*	-123,601*
	(0,1948)	(0,1268)	(0,2403)	(0,9132)

SC is social capital; network size is the number of networks owned by TMT. Network prominence is the extent of the network that TMT follows with a weight of 1 = local, 2 = domestic, 3 = regional, 4 = Asia, 5 = global; network position, that is, the position of the TMT in the network followed by a weight of 1 = member, 2 = deputy chairman/secretary, 3 = Chair. SIZE represents company size, FAG is the age of the company, FORIST is foreign interest, BRDSZE is the number of TMT members in the company.

\* significant 1%, \*\* significant 5%. Juxtaposed values are standard errors.

Hypothesis testing shows the new measurement of the network as a social capital proxy, namely Network Average (NA), has a positive effect on firm's market performance, as well as the firm's equity turnover. It reflects that the higher network ownership by TMT will increase the firm's easy access to resources so that they can respond quickly and accurately in their strategic decisions. Table 2. also shows the results of robust tests by replacing social capital measurements following Young (2005) that separates the three dimensions of the network. Furthermore, the regression results of Network Average (NA), as a proxy of social capital show more useful in explaining the impact of social capital on firm performance through TMT's quality network.

## 5. Conclusion

Empirical evidence of this study suggests a positive influence of social capital on firm's market performance as well as managerial performance as measured by ROE. The high quality of the firm's network through the ownership of TMT network will increase the value of the firm's social capital in industry and also improve the firm value and return to shareholders.

The results prove the effectiveness of Network Average (NA) as a proxy for social capital compared to the three separated network dimensions. The high number of networks needs balancing with the breadth of network coverage itself to be able to provide benefits according to company expectations. Also, the number of networks owned by TMT needs to be accompanied by the quality of TMT's position on the network. The Average Network (NA) reflects the quality of a firm's network because the combination of these dimensions contains values, trusts, and standard that accumulates as a source of excellence and competitive performance in the company. It is as stated by Saha & Banerjee (2015) that social capital reflects not only identity but also social interaction, trust, and shared vision. These findings provide practical implications for firms to arrange the composition of TMT's network for competitive advantage by adjusting to their competency's. Investors can also consider the strategic capability of a firm's TMT by looking at the network has developed. The membership of TMT in many large and strategically positioned networks is a signal of guarantee for the firm's superiority and the safety of investor funds.

However, this research is limited to using network quality approach by giving a scale weight in the form of dummy for each component of social capital that is the network size, prominence of network, and position of each member of TMT's network. It has done based on the argument that all three have diverse data and are difficult to standardize. Because the assessment of the shape, area, and coverage of each network is different, so we need a condition-based weighting of each component for each network of top management team members in the industry. The robust test results of this study that show the influence of the number of networks with performance supported by several previous studies have opened the possibility of applying other techniques in determining the weighting of social capital measures such as Principal Component Analysis (PCA). Opportunities for the use of Principal Component Analysis (PCA) to calculate the weighting of social capital measures

can do as long as data are standardized before they are applied. Furthermore, this standardization requires the conversion of data into numerical categories. However, the application of PCA techniques in the search for appropriate weights for the size of components of social capital requires caution in the number of principal components to strengthen the alleged linear correlation between and reduce information loss from the original data.

Besides, this research emphasizes the cognitive dimension of social capital and has not yet addressed the overall aspect of social capital, namely the structure and relational elements that constitute the domain of network theory. Therefore, the next researcher in the field of corporate governance should consider the analysis of social capital with its overall dimensions using the network theory approach in addition to the upper echelon theory and social capital theory. Networks represent the fundamental characteristics of complex systems that enable one to connect structurally and interactively interact between stakeholders.

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