

Examining network characteristic dynamics of kinship-based families on performance within Indonesian SMEs

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Abstract

Purpose – This study aims to examine the moderating effect of firm age and size on the relationship between network characteristics (network centrality, network density and tie strength) and firm performance. This study also aims to investigate the difference in the effect of network characteristics on the firm performance of Javanese and Minang ethnic enterprises.

Design/methodology/approach – An explanatory research design was adopted, which involved a survey in the form of a structured questionnaire of target owners and managers of 34 Javanese ethnic enterprises in North Sumatra, Indonesia and 100 Minang ethnic enterprises in Yogyakarta, Central Java, Jakarta and Bogor, Indonesia. The data is analysed using structural equation modelling.

Findings – The findings of this study confirm resource dependency and social capital theory. Network centrality, network density and tie strength have a significant effect on firm performance. The results also show support for the moderating role of firm age on the relationship between network characteristics and firm performance. The moderating role of firm size is not supported. The comparative test of the influence of the three network characteristics on ethnic enterprise performance confirms that Javanese ethnic enterprises have identity-based networks, while Minang ethnic enterprises use calculative-based networks.

Originality/value – The originality of this study lies in the investigation of the role of family and external partners in the running of ethnic enterprises at start-up and during the growth phase. The definition of “family” is based on a kinship perspective due to the specificity of Asian cultures, particularly in Indonesia. Of the hundreds of tribes in Indonesia, the Javanese and Minang were chosen because both are well-known as entrepreneurial tribes, have unique cultural values and have active migrants to other provinces.

Keywords Network centrality, Network density, Ethnic enterprise performance, Minang, Javanese, Age and size of the firm

Paper type Research paper

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Introduction

The study of ethnic entrepreneurship arises from the need to examine the cultural and social nature inherent in entrepreneurial activities (Elo *et al.*, 2018). Ethnic entrepreneurship involves the process of converting ethnic attributes and content into unique and authentic goods or services that have economic value (Aldrich and Waldinger, 1990). Ethnic enterprises, especially micro-, small- and medium-sized enterprises (MSMEs), lack internal resources, which makes them reliant on their owner's social networks to obtain relevant information and knowledge necessary to develop a business (Szkudlarek and Wu, 2018; Das and Goswami, 2019).

In the literature on social networks, there are two different schools of thought (Burt, 2005). First is the perspective of network closure proposed by Coleman (1988). A closed network is characterized by a high level of collective solidarity, which implies a relationship based on a shared understanding of norms or values (Coleman, 1988). This perspective explains that dense networks assist enterprises in gaining direct access to diverse valuable and critical information and knowledge (Coleman, 1988; Ashraf *et al.*, 2019). However, the knowledge shared in cohesive networks tends to be homogeneous with increased interaction between network partners (Gulati *et al.*, 2000). In other words, closed networks can cause collective blindness towards information sources outside the network (Nahapiet and Ghoshal, 1998).

The second school involves the concept of an open network, which consists of the strength of weak ties, as described by Granovetter (1973) and structural holes from Burt (1992). Granovetter (1973, 2005) states that strong ties play a crucial role in networking, but weak ties should be formed with as many parties as possible to obtain heterogeneous information and knowledge. The idea of structural holes describes how an enterprise gains benefit by bridging or brokering diverse resources from unrelated groups (Burt, 2004).

Furthermore, the empirical research findings on the effect of network characteristics on firm performance are still inconsistent. In general, some studies have found that network centrality (Liu *et al.*, 2011; Kim and Lee, 2018; Das and Goswami, 2019; Wang *et al.*, 2019), network density (Kim and Lee, 2018; Das and Goswami, 2019) and tie strength (Liu *et al.*, 2017; Korir, 2018) have a significant and positive effect on firm performance. However, other studies have found a non-significant relationship between network centrality (Li *et al.*, 2013), network density (Alkuaik *et al.*, 2016) and tie strength (Li *et al.*, 2013; Papastamatelou *et al.*, 2016) on firm performance. Liu *et al.* (2017) further state that the different findings are closely related to contextual or contingency factors, namely, organizational and environmental context. Organizational factors that need to be examined include firm age and size (Bhushan and Pandey, 2015; Papastamatelou *et al.*, 2016; Corredoira and Mcdermott, 2018). Meanwhile, the environmental factor that needs to be examined in relation to the use of closed and open networks is the cultural nature inherent in entrepreneurial activities (Szkudlarek and Wu, 2018).

Firm age and size represent the development of an enterprise (Majumdar, 1997; Arend, 2014). Younger and smaller enterprises exhibit different behaviours than larger and older enterprises in terms of their utilization of closed and open networks (Hite and Hesterly, 2001; Bhushan and Pandey, 2015; Corredoira and Mcdermott, 2018). Due to the limited resources possessed by small and young firms, cohesive networks (i.e. kinship and friendship) are prominent in pioneering businesses because they can facilitate solidarity and assistance (Corredoira and Mcdermott, 2018; Evansluong and Ramirez-Pasillas, 2019). Once an enterprise is developed, it may establish weak ties with various parties such as customers and suppliers of other ethnic groups, banks and governments (Elo, 2016; Corredoira and Mcdermott, 2018). The conjecture that the networking behaviour of ethnic enterprises differs

at each development phase, both in terms of age and size, needs to be empirically tested (Bhushan and Pandey, 2015; Corredoira and Mcdermott, 2018; Szkudlarek and Wu, 2018).

The environmental factor that needs to examine is ethnicity. Ethnicity, in this study, is discussed as an identity formed based on familial relationships. However, the term “family” has received substantial criticism from some scholars, who consider it as a fuzzy and hard-to-define concept due to its contextual and cross-cultural variation (Stewart, 2003; Stewart and Miner, 2011; Verver and Koning, 2018). They further recommended that the term “family” can be understood from a kinship perspective. The kinship perspective, rooted in the discipline of anthropology, is advocated because it allows business and entrepreneurship researchers to consider a sense of families that goes beyond blood and marriage relations (Fletcher, 2002; Verver and Koning, 2018). In addition, in communal culture, as exists in Southeast Asia, people understand the “family” to include not only the nuclear and extended family (household/blood and marriage relatedness) but also family formed by ancestral relatedness, place of origin relatedness and language or dialect relatedness (Verver and Koning, 2018). Considering the context of this study, the kinship perspective is adopted as recommended by Stewart (2003) and Verver and Koning (2018) to clarify the definition of “family”. Therefore, this study contributes to the issue of the family role across borders and contexts by clarifying the definition of “family” in accordance with the contextual situation in Indonesia, particularly that of the Javanese and Minang people.

This ethnic or kinship network is evidently beneficial in starting and developing businesses in the host region, as shown by some recent studies. For instance, Szkudlarek and Wu (2018) found that Chinese kinship in The Netherlands provides information, knowledge and financial support for the Chinese people in establishing businesses. Other studies focusing on research in Southeast Asia also describe the same evidence such as the benefit of kinship networks in the formation and growth of Chinese enterprises in Cambodia (Verver and Koning, 2018; Verver *et al.*, 2019), Thailand (Koning and Verver, 2013) and Indonesia (Koning, 2007). Therefore, this study argues the importance of being a family with broader boundaries may affect the SMEs’ performance. As a result, some network characteristics reveal a significant role in the performance of the SMEs and guarantee their sustainability.

These recent studies raise transnational migration as their core issue. The definition of migration in ethnic entrepreneurship also includes transregional or provincial migration in a country as part of the discussion (UN Migration Agency, 2019). These kinds of migration are not yet explored in the literature on ethnic entrepreneurship (Indarti *et al.*, 2020). Therefore, conducting research on this unexplored migration issue, focusing on Indonesia in particular, can provide a significant contribution due to the existence of diverse ethnic groups in this country (Fitrimawati *et al.*, 2015).

Specifically, this study compares the effect of network characteristics on firm performance in Javanese and Minang ethnic enterprises. These are two entrepreneurial tribes that actively migrate to other provinces in Indonesia. They have contrasting cultural values related to entrepreneurial behaviour, particularly their utilization of closed and open networks (Hastuti *et al.*, 2015; Hermawan *et al.*, 2018; Rahman *et al.*, 2019). In summary, this research aims to examine and propose a new type of performance prediction model using causality among network characteristics (i.e. network centrality, network density and tie strength) that interact with moderating factors (firm age, size and ethnic groups).

The present paper is organized as follows. The first section presents the background and objective of the study. The second section discusses two main theories used in the study (i.e. resource dependency and social capital theory) and social networks in ethnic entrepreneurship followed by hypothesis development. The research methodology, including the design,

respondents, data collection techniques and data analysis methods, is discussed in the third section. Finally, the fourth and fifth sections discuss the findings of the study and present a discussion, conclusion and suggestions for future studies.

Literature review and hypothesis development

Resource dependency and social capital theory

Resource dependency theory reveals that ethnic enterprises, particularly younger and smaller ones, do not have all the resources needed to carry out business activities, which makes their dependence on external resources inevitable (Pfeffer and Salancik, 2003). Consequently, ethnic enterprises possess many resources to gain power over enterprises that lack them (Emerson, 1962). This control places the younger and smaller enterprises in a low bargaining position, which is detrimental in the long run. Therefore, to anticipate the side effect of resource dependency, younger and smaller ethnic enterprises try to increase their independence by pursuing various alternatives such as growing larger (Thompson, 1967).

Social capital theory explains the behaviour pattern of ethnic enterprises networking when they grow larger or older. Ethnic enterprises need to establish equal or interdependent social relationships with various stakeholders to facilitate resource exchange, rather than one-sided dependency (Thompson, 1967; Coleman, 1988; Pfeffer and Salancik, 2003). An interdependent relationship or reciprocity occurs when an ethnic enterprise expects a reward for a good deed, and then the business partners become obligated to reciprocate (Coleman, 1988). In this study, social capital theory complements the resource dependency theory, helping to explain the role of social networks as a means of obtaining resources from external parties at each phase of enterprise development (Woolcock and Narayan, 2000).

Social network in the context of ethnic entrepreneurship

Regarding the relationship between social networks and ethnic entrepreneurship, Assudani (2009) explains that there are at least three perspectives: the middleman minority perspective (Bonacich, 1973); the ethnic enclave perspective (Wilson and Martin, 1982) and the collectivist perspective (Butler and Herring, 1991). The underlying idea of the middleman minority and ethnic enclave perspectives is that transnational immigrants develop intermediary businesses (e.g. contractors or retail trade) or form a geographically concentrated site because of ill-treatment by the host country, like racial discrimination (Bonacich, 1973; Wilson and Martin, 1982). Thus, these two perspectives are associated with the entrepreneurial spirit of the oppressed. In comparison, the collectivist perspective states that cultural attributes and content such as religious or communal solidarity, encourage ethnic minority entrepreneurs to establish and develop their own enterprises (Butler and Herring, 1991; Ojo, 2019). This perspective also illustrates that social learning occurs in kinship communities that enable entrepreneurs to initiate businesses (Butler and Herring, 1991; Paré *et al.*, 2008).

This study uses the collectivist perspective to explain ethnic entrepreneurship in Indonesia for three fundamental reasons. Firstly, the ethnic enterprises studied in this research are local ethnic groups in Indonesia that are not related to the issues of transnational migration or ill-treatment by a host country. Secondly, the Javanese and Minang people have “family” solidarity for social learning and financial support based on a “sharing without reckoning” principle rather than a formal business exchange (Greene and Butler, 1996; Stewart, 2003; Hastuti *et al.*, 2015; Hermawan *et al.*, 2018). Based on the kinship logic, the sense of families in the Javanese and Minang ethnic groups is formed by blood and marriage relatedness, ancestral relatedness, language and dialect relatedness and clan

relatedness (Peredo, 2003; Verver and Koning, 2018). Thirdly, the collectivist perspective highlights ethnic minority entrepreneurs who can be seen in the context of Indonesia as members of migrant ethnic groups and so-called minorities in terms of number in the host area (Butler and Herring, 1991; Greene and Butler, 1996; Hastuti *et al.*, 2015).

The collectivist perspective focused on individual resources (micro-level), can be enriched by a mixed-embeddedness framework that looks more comprehensively at the structure of business opportunities (meso-level) and institutional support (macro-level) in the host region (Kloosterman, 2010). The locations of this research – Medan, Binjai and some cities on Java Island (e.g. Jakarta, Bogor and Yogyakarta) – are considered to be tourist cities in Indonesia and demonstrate unique cultural artefacts in a variety of traditional culinary dishes, arts, crafts and cultural performances (Setyobudi, 2014). These areas are fertile arenas for ethnic companies to thrive (meso-level). At the macro level, the local government of the host areas has been aggressively supporting MSMEs, especially by providing ease of licensing and access to financial institutions through provincially owned banks (Hadiyati, 2015). This institutional support facilitates the growth of ethnic enterprises.

Network characteristics and firm performance

Network characteristics can be analysed using two dimensions: the structural dimension illustrates the configuration of the relationship patterns between actors while the relational dimension illustrates the degree of strength of the relationship between actors (Burt, 1982). The structural network in the context of this study is the ethnic community. Membership involvement in an ethnic community network is a way to measure the social capital of an ethnic enterprise, including both the centrality of an enterprise and the network density itself (Woolcock and Narayan, 2000; Liu *et al.*, 2011). Meanwhile, the strength of ties is reflected in how enterprises establish ties with various parties such as customers, suppliers, financial institutions, governments, research institutions and universities (Liu *et al.*, 2017). Using both dimensions can reveal a complete picture of all the networks established by ethnic enterprises, including those based on ethnic communities and external networks.

Impact of network centrality on firm performance. Network centrality is the extent to which focal actors occupy a strategic position in a network based on involvement with many significant ties (Wasserman and Faust, 1994). Central actors are perceived to have a good reputation and credibility among other actors in a network (Wang, 2015). Therefore, peripheral actors depend on the central ones because they need legitimacy and resource support (Pfeffer and Salancik, 2003; Kim, 2018). The central position of a focal enterprise in an ethnic community allows it to gain early access to new information and knowledge and accelerate the initiative to improve business operations (Aktamov and Zhao, 2014; Das and Goswami, 2019). This advantage can certainly allow the enterprise to achieve a more qualified performance than its competitors (Aktamov and Zhao, 2014; Dolfsma and Eijk, 2016; Kim, 2018). Therefore, it is posited that:

H1a. The more central the position of an enterprise in a network, the higher the performance.

Impact of network density on firm performance. Network density reflects the interconnection between actors in a network (Gnyawali and Madhavan, 2001). The greater the interconnectedness, the higher the density (Gnyawali and Madhavan, 2001). A dense network can facilitate faster and more efficient information traffic due to the large degree of interconnectedness and joint routines (Coleman, 1988). A dense network can also mitigate the uncertainty of actors' behaviour through shared beliefs and norms (Gnyawali and Madhavan, 2001; Liu *et al.*, 2011). Enterprises are able to obtain high-quality information for

performance improvement because a dense network facilitates community sanctions to prevent opportunistic behaviour (Granovetter, 1984; Kim and Lee, 2018). In line with these arguments, the following hypothesis is proposed:

H1b. The denser the network owned by an enterprise, the higher its performance.

Impact of tie strength on firm performance. Tie strength is the strength level of a relationship measured by the frequency of communication, emotional intensity, intimacy and reciprocal service (Granovetter, 1973). An enterprise's long experience in partnering with the same contacts will result in higher quality information and knowledge because parties know one another's motives and routines (Lee, 2007). Reputation is at stake for network actors in the process of establishing strong ties (Rost, 2011). Thus, the resources obtained from stakeholders through strong ties help the enterprise to improve its performance (Mani and Lakhali, 2015; Liu *et al.*, 2017; Korir, 2018). Hence, it is hypothesized that:

H1c. The stronger the ties an enterprise has with various parties, the higher the performance.

Moderating effect of firm age on the relationship between network characteristics and firm performance. Firm age is the length of existence or survival of a firm (Jiang *et al.*, 2011). When enterprises are young or in their early days of establishment, they face the liability of newness (Stinchcombe, 1965). In other words, compared to older enterprises, younger ones are assumed to lack experience, the base of influence, recognition, endorsement and stable relationships with business partners (Stinchcombe, 1965; Baum, 1996).

During the founding phase, an ethnic enterprise attempts to gain a central or reliable position in its ethnic community network by becoming an administrator or actively involved in the activities that are held. By playing an active role, an enterprise owner can start to be recognized and acknowledged and can ultimately gain the trust of other entrepreneurs in the ethnic community (Wang, 2015; Yang and Aldrich, 2017). Therefore, network centrality has a strong effect on younger enterprises. Furthermore, as an enterprise grows older, its existence becomes more established or well-known (Yang and Aldrich, 2017). In this phase, the level of urgency to play a central role in the ethnic community network is no longer as high as when the enterprise was younger. The enterprise is able to maintain its existence even though its position is not as central as when it was newly established. Thus, we argue that:

H2a. The effect of a central position in an ethnic community network on performance is weaker in older enterprises than in younger ones.

The next discussion is the influence of network density on enterprise performance at different age phases. The liability of newness faced by enterprises in their founding phase involves their lack of experience. When first established, an enterprise has relatively no experience doing business (Baum, 1996). Therefore, younger enterprises really need crucial initial information to operate such as information on ethnic business opportunities, consumer behaviour and market demand trends in the host area (Lee, 2007). Such information does not spread freely because it is only known to a limited number of ethnic entrepreneurs who join an ethnic community (Lee, 2007; Assudani, 2009). By joining the ethnic community, the newly established enterprise gains access to the information. Therefore, in this phase, the influence of network density on enterprise performance is strong. When an enterprise is older, it has accumulated experience and knowledge

(Yang and Aldrich, 2017). The level of urgency to access initial information is no longer as high as when it is younger. Hence, this study proposes that:

H2b. The effect of network density on performance is weaker in older enterprises than in younger ones.

Finally, the effect of tie strength on enterprise performance differs at two different age phases. Younger enterprises face the liability of newness as they do not have any track record of relationships with business partners, particularly with customers and suppliers (Stinchcombe, 1965; Baum, 1996). The absence of historical relationships with business partners can disrupt an enterprise's performance because business operations cannot run without them (Liu *et al.*, 2011). Therefore, the level of urgency to build intimate relationships with business partners in the early days of establishment is very high (Yang and Aldrich, 2017). As the enterprise grows older, relationship track records with various business partners are established. The enterprise's efforts to make itself known to various external parties are no longer as strong as when it was young because good fellow business partners promote one another (Ko and Liu, 2016). Thus, the proposed hypothesis is that:

H3c. The effect of tie strength on performance is weaker in older enterprises than in younger ones.

Moderating effect of firm size on the relationship between network characteristics and firm performance. Firm size symbolizes the level of adequacy and needs for resources (Hite and Hesterly, 2001; Indarti, 2010; Corredoira and McDermott, 2018). In this study, firm size is measured by the number of employees (Radipere and Dhlwayo, 2014). When smaller in size, an enterprise faces the liability of smallness, namely, a lack of internal resources, particularly human and financial resources (Aldrich and Auster, 1986). To overcome this problem, smaller enterprises look for easy and low-cost solutions by recruiting prospective employees from cohesive networks such as ethnic communities because such networks are bound by the same cultural values and origin (Ko and Liu, 2016; Szkudlarek and Wu, 2018).

Furthermore, smaller enterprise owners endeavour to play a central role in their ethnic communities to enhance their reputation and attractiveness to the unemployed members of the ethnic community. This is vital because prospective employees consider an enterprise's reputation; in other words, whether the enterprise owners deserve their trust (Aktamov and Zhao, 2014; Wang *et al.*, 2019). When an enterprise manages to get additional human resources from an ethnic community, the enterprise's performance improves (Ko and Liu, 2016). Hence, in smaller enterprises, the influence of an enterprise's central position in the ethnic community network on its performance is strong.

In the next phase, when enterprises begin to thrive, they have sufficient resources to enlarge the scale and scope of their economies (Hite and Hesterly, 2001). For this purpose, an enterprise seeks new sources of knowledge by seeking employees outside of the ethnic community network (Granovetter, 2005). This action reduces the enterprise owner's central role in the ethnic community network because the owner shifts the focus to finding new sources of knowledge. In other words, the influence of an enterprise's central position in the ethnic community network on its performance is not as strong as when the enterprise was smaller. So, it is hypothesized that:

H3a. The effect of network centrality on firm performance is stronger among smaller enterprises than larger ones.

The next discussion looks at how the effect of network density on enterprise performance varies at two different size phases. Smaller enterprises lack the financial resources to conduct formal recruitment to find trustworthy employees (Ko and Liu, 2016). Therefore, smaller enterprises depend on dense networks such as ethnic communities. When people in a network get to know one another, it becomes cheaper and easier to find trustworthy people because high-cost formal recruitment is no longer required (Ko and Liu, 2016). In this phase, it is argued that the influence of network density on enterprise performance is strong.

When an enterprise grows larger, financial resources become available (Aldrich and Auster, 1986; Ko and Liu, 2016). The enterprise can conduct a series of formal recruitment processes for prospective employees outside of the ethnic community network to obtain new sources of knowledge. This action causes a smaller effect of a dense ethnic community network on firm performance. So, it is deduced that:

H3b. The effect of network density on firm performance is stronger among smaller enterprises than larger ones.

The last discussion looks at the effect of tie strength on enterprise performance at two different size phases. When an enterprise is smaller, the focus is on building strong ties with business partners to obtain the resources necessary for survival (Rost, 2011; Liu *et al.*, 2017; Corredoira and Mcdermott, 2018). In this phase, the effect of tie strength on enterprise performance is strong. As the enterprise grows, it needs fresher and heterogeneous information and knowledge from other parties outside its established ties (Lee, 2007). In other words, the enterprise seeks to form weak ties by collaborating with previously unrelated parties (Granovetter, 2005; Bhushan and Pandey, 2015; Corredoira and Mcdermott, 2018). With the shifting focus of a larger enterprise to establish weak ties, the effect of tie strength on enterprise performance at this phase is weaker than when the enterprise is smaller. This leads to the following hypothesis:

H3c. The effect of tie strength on firm performance is stronger among smaller enterprises than larger ones.

Comparing the influence of network characteristics on the performance of Javanese and Minang ethnic enterprises. Hite and Hesterly (2001) use the term “identity-based networks” to describe closed networks and “calculative-based networks” to explain open networks. In an identity-based network, the identity of a network is considered more important than the specific economic functions or resources provided by the network (Hite and Hesterly, 2001). Ethnic ties in this network are very cohesive because they are highly oriented towards the prominence of network stability, togetherness and harmony (Assudani, 2009; Szkudlarek and Wu, 2018).

However, the identity-based or closed network contains a paradox of embeddedness that such a network is costly to maintain because of the mutual reciprocity norm (Uzzi, 1997). If the norm is not met, trust in the ethnic community will be damaged (Uzzi, 1997; Assudani, 2009). The next impact is that members tend to be locked into their own ethnic membership, thereby limiting information and knowledge from outside the network (Uzzi, 1997; Burt, 2004; Assudani, 2009).

In summary, the ethnic communities that accentuate the identity-based network characteristics can indeed be natural business incubators for new or small enterprises because they facilitate fast, easy and inexpensive access to resources (Hite and Hesterly, 2001; Assudani, 2009). However, only relying on this type of network is not enough when an ethnic enterprise wants to develop the scale and scope of its economy (Hite and Hesterly, 2001). The thick wall of

the identity-based network makes enterprises less able to build relationships with other external parties for business development purposes (Hite and Hesterly, 2001; Granovetter, 2005; Assudani, 2009).

The next discussion involves open or calculative-based networks (Hite and Hesterly, 2001). In a calculative network, the potential goals and functions of network ties become more dominant than the bond identity (Hite and Hesterly, 2001). In other words, the calculative-based network encourages its members to exploit resources optimally, not just to have the same ethnic identity (Hite and Hesterly, 2001; Assudani, 2009). Therefore, in this network, ethnic enterprises aggressively build weak ties with various parties from outside their ethnic community network to obtain diverse and non-redundant information and knowledge for performance excellent (Hite and Hesterly, 2001; Granovetter, 2005). In the context of ethnic entrepreneurship, ethnic cultural values become important determinants of the ethnic enterprises' behaviour in networking, especially in the utilization of identity-based or calculative-based networks (Aldrich and Waldinger, 1990; Hite and Hesterly, 2001; Assudani, 2009).

As the study focuses on ethnics in Indonesia, Table 1 presents demographic information including a number of areas, population, ethnics and local language in Indonesia compared to those in Europe. The data shows that in terms of population, Indonesia is clearly smaller than Europe (20% over land and 50% overpopulation). Meanwhile, in the context of ethnicity and language, Indonesia has more diversity (almost 7x higher for ethnic and almost 2.75x higher for local/regional language) than those in the continent. Moreover, Indonesia is an archipelago country, consisting of more than 17,000 islands with five biggest: Java (the highest density), Sumatra, Kalimantan, Sulawesi and Papua. These demographic facts bring Indonesia to a unique position compared to its neighbour such as Singapore, Malaysia, Thailand or Vietnam. Such characteristics enable Indonesian people to move around the islands and leave their hometown, as called *merantau* (wandering tradition). In addition to that, the Indonesian Government has been initiating many innovative policies to support and strengthen entrepreneurs to have their own business, which is mainly organized by The Ministry of Cooperative and SMEs and Tourism and Creative Economy Agency (Wikipedia, 2020a, 2020b, 2020c).

Among the many ethnic groups in Indonesia, there are at least two that have a prominent entrepreneurial and migration tradition: the Javanese and Minang (Fitrimawati *et al.*, 2015; Hastuti *et al.*, 2015; Hermawan *et al.*, 2018; Rahman *et al.*, 2019). The Javanese recognize several forms of kinship patterns, including *keluarga batih/somah* (nuclear family), *sanak sedulur* (extended and ancestral based family) and *sesuku* (language and dialect relatedness) (Yusuf and Suwijah, 1997). Furthermore, every Javanese individual is required to accentuate their Javanese identity by maintaining a life of harmony with others in the community (Hermawan *et al.*, 2018). This principle is clearly illustrated in the philosophy of *rukun agawe santoso, congkrah agawe bubrah* [harmony makes prosperity, conflict makes

Table 1.
Demographic
comparison between
Indonesia and
Europe

Items	Indonesia	Europe
Area (land)	1.9 million km ²	10.2 million km ²
Population (2018)	267.67 million	746.6 million
Ethnic groups	± 600 groups	± 87 groups
Local/regional languages	± 700	± 255

Source: Wikipedia (2020a, 2020b, 2020c)

disparity] (Hermawan *et al.*, 2018). This principle is also manifested in the Javanese ethnic community with the existence of a collective decision-making process (consensus) and *gotong royong* or mutual help (Hermawan *et al.*, 2018).

The specificity of Javanese entrepreneurial behaviour is the nature of honesty and *nrimo* (Hermawan *et al.*, 2018). The philosophy of *nrimo* means that the Javanese consider entrepreneurship not as an act of ambitious profit-seekers but of surrendering to God because the Javanese believe that sustenance is regulated by God (Hermawan *et al.*, 2018). Thus, it can be concluded that the network built by the Javanese ethnic group in the host areas is an identity-based network (Hite and Hesterly, 2001; Hermawan *et al.*, 2018). In other words, the owners of Javanese ethnic enterprises prefer to strengthen their central position and remain actively involved in their ethnic communities. They also make more of an effort to solidify strong bonds with established business partners rather than explore new networks with other parties.

The second ethnic group under study is the Minang. This ethnic group follows a philosophy of *wrang awak*, depicting strong bonds between those of the same ethnic identity (Hastuti *et al.*, 2015). The kinship structure of the Minang people consists of six forms: *semande* (nuclear family/born of the same mother), *seperut* (extended family/born of the same grandmother), *senenek* (ancestral relatedness/born of the same great-grandmother), *seninik* (*penghulu adat*/traditional leader relatedness), *sekaum* (family name relatedness) and *sesuku* (clan relatedness) (Damsar, 2016). Furthermore, the Minang ethnic entrepreneurs who are established in business usually become mentors to their kinsmen who have just migrated (Rahman *et al.*, 2019). These mentors also involve the prospective entrepreneurs in ethnic community activities to exploit more resources (Rahman *et al.*, 2019).

The Minang ethnic group also lives by the philosophy of *alam takambang jadi guru* [a universe is a place of learning] (Fitrimawati *et al.*, 2015). Therefore, this ethnic group is widely known to build networks with various parties easily and adapt quickly to new conditions and places (Fitrimawati *et al.*, 2015; Rahman *et al.*, 2019). The goal of networking and adapting for this ethnic group is to obtain as many external resources as possible for business development (Fitrimawati *et al.*, 2015; Rahman *et al.*, 2019). The result is that ethnic Minang enterprises such as Padang restaurants, have spread throughout Indonesia and even abroad (Hastuti *et al.*, 2015).

Thus, we conclude that, compared to the Javanese ethnic group, which accentuates network stability, the Minang ethnic group prioritizes network adaptability for resource exploitation, both from ethnic communities and various parties outside ethnic ties (Hite and Hesterly, 2001; Rahman *et al.*, 2019). In other words, the Minang ethnic enterprise owners still maintain their central role and active involvement in their ethnic communities and have strong ties with business partners. However, the influences of network centrality, network density and tie strength on the performance of Minang ethnic enterprises are not stronger than those of Javanese ethnic enterprises because the Minang ethnic enterprise owners additionally focus on building weak ties (Damsar, 2016; Hermawan *et al.*, 2018). This suggests the fourth hypothesis:

- H4a. The effect of network centrality on firm performance is higher among Javanese ethnic enterprises than among Minang ethnic enterprises.
- H4b. The effect of network density on firm performance is higher among Javanese ethnic enterprises than among Minang ethnic enterprises.
- H4c. The effect of tie strength on firm performance is higher in Javanese ethnic enterprises is higher than among Minang ethnic enterprises.

Figure 1 depicts all hypotheses presented in this study.

Research methodology

Research design, respondents, sampling, data collection and data analysis methods

The study deployed an explanatory research design using a hypothetic-deductive approach to meet the research objectives. A survey by means of a structured questionnaire was conducted in 200 ethnic enterprises in Indonesia (in North Sumatra for the Javanese enterprises; in Yogyakarta, Central Java, Jakarta and Bogor for the Minang ones) between September and November 2019. The selected respondents included owners/managers (OMs) as representatives of the enterprises (Hambrick and Mason, 1984; Indarti, 2010).

The research locations of the Minang and Javanese ethnic enterprises are not their native regions because this study highlights the migratory experience. The original province of the Minang ethnic group is West Sumatera, while the Javanese ethnic group is from Central Java, Yogyakarta and East Java. A purposive sampling technique was used with two criteria: a) the OMs identify themselves as Javanese or Minang and sell ethnic products; and b) the OMs join their respective ethnic communities. The ethnic community is defined as a kinship network that consists of blood and marriage relatedness/household, ancestral relatedness, language and dialect relatedness and clan relatedness.

Of the 200 enterprises surveyed, only 34 Javanese enterprises joined ethnic communities, while all 100 Minang enterprises joined. Examples of ethnic communities include Ikatan Warga Saniangbakar, Ikatan Keluarga Minang and Manunggal Sejaya. The 134 enterprises were used for further analysis, using structural equation modelling with Warp Partial Least Squares (WarpPLS) 6.0.

Profile of respondents

The majority of respondents were male (76.1%), 36–55 years old (68.7%), with high school and college education (74.7%) (Table 2). Among the 134 respondents, 67 (50%) of them migrated between 2001 and 2019. In terms of the enterprises, most (86.5%) of them are known to frequently

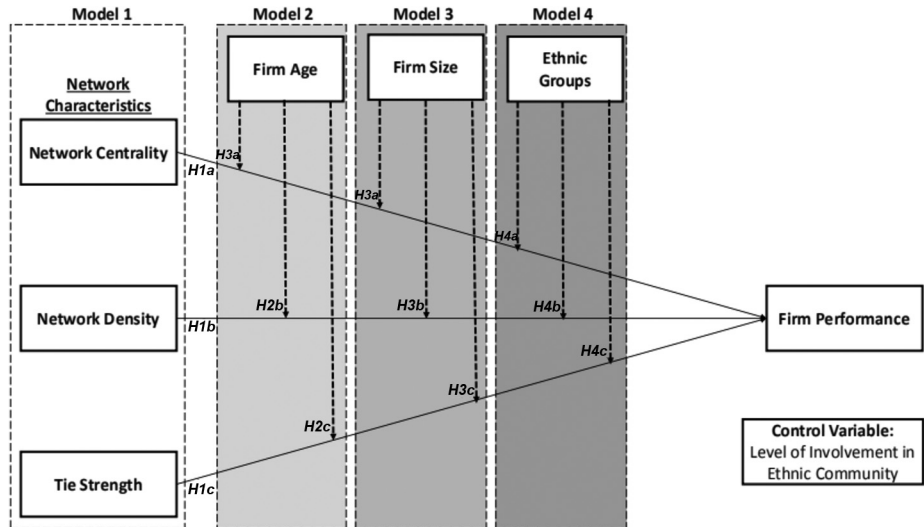


Figure 1. Research model

Characteristics	Total	(%)	Characteristics	Total	(%)
<i>Gender</i>			<i>Position</i>		
Male	102	76.1	Owner	109	81.4
Female	32	23.9	Manager	24	17.9
			Owner and manager	1	0.7
<i>Age category</i>			<i>Migrating year</i>		
15–35 years old	33	24.6	1950–1980	16	11.9
36–55 years old	92	68.7	1981–2000	51	38.1
56–75 years old	9	6.7	2001–2019	67	50
<i>Level of education</i>			<i>Province of origin</i>		
Elementary school	12	8.9	West Sumatera	100	74.6
Junior high school	22	16.4	Central java	25	18.7
Senior high school	72	53.8	Yogyakarta	2	1.5
College degree	28	20.9	East java	7	5.2

Performance
within
Indonesian
SMEs

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Table 2.
Profile of the
owner/manager of
the enterprise

(often and very often) participate in activities held in their ethnic communities. The majority use 1 to 6 employees (73.2%) for 1 to 11 years (59.7%) and sell ethnic culinary products (98%). In addition, most (70.7%) ethnic enterprises, both the Javanese and Minang, have strong bonds with customers, suppliers, competitors, platform companies (Gojek/Grab) and banks (Table 3).

Measurements

Table 4 describes the measurements used in this study. Network centrality, network density and tie strength were measured using items adapted from Liu *et al.* (2011) and Kim and Lee (2018). Our measurements are also in line with the conceptual work of Masurel *et al.* (2002) for measuring the performance of ethnic/immigrant enterprises. Firm age and size were grouped in two subsamples (younger vs older; smaller vs larger) based on the average score of firm age and number of employees, respectively. Due to the unavailability of objective data, the firm performance was measured by the perceived rate of sales, profit, market share, cost reduction and customer complaints (Kim and Lee, 2018). A confirmatory factor analysis was conducted to test the validity of network centrality, network density, tie strength and firm performance; it found one invalid item (KP5) with factor loading < 0.4. As suggested by Hair *et al.* (2014), this item has been dropped. In addition, all the variables passed the reliability testing with Cronbach's alpha > 0.6 (Sekaran and Bougie, 2013).

Results and discussion

Descriptive statistics and quality of the proposed model

Based on the descriptive statistics (Table 5), the responses range from 3.6 to 4.2. All variables have a relatively high score, except for network density (3.6), which is considered modest. Before testing the proposed hypotheses, the model was carefully checked for the issue of multicollinearity of the independent and moderating variables, endogeneity and goodness of fit of the model. The multicollinearity test of the independent variables shows that the correlation between network centrality and network density is considered strong ($r = 0.478$; $p < 0.01$); however, the value of tolerance and variance inflation factor (VIF) is 1. The correlation value for moderating variables (age and size) is also strong ($r = 0.632$; $p < 0.01$) but the tolerance and VIF test scores are 0.601 and 1.665, respectively. These results indicate no multicollinearity effect in the model for the independent variables (i.e. network centrality, network density, tie strength) or the moderating variables (i.e. age and size) (Hair *et al.*, 2014).

Characteristics	Total		(%)	
	Javanese	Minang	Javanese	Minang
<i>Membership status in the ethnic community</i>	34	100	34	100
Join	66	0	66	0
Not Join				
<i>Activities/events held in the ethnic community*</i>	32	99	94.1	99
Gathering	26	100	76.4	100
Cultural events	1	83	2.9	83
Seminar	28	97	82.3	97
Charity	0	94	0	94
Environmental care events	30	99	88.2	99
Religious events				
<i>Frequency of attendance in ethnic community activities</i>	4	18	11.8	18
Very often	25	69	73.5	69
Often	5	13	14.7	13
Rare				
<i>Age category**</i>	11	69	32.3	69
1–11 years old	23	31	67.7	31
12–55 years old				
<i>Number of employees category***</i>	25	73	73.5	73
1–6 people	9	27	26.5	27
7–80 people				

Table 3.
Profile of the
enterprise

Notes: *Activities held in an ethnic community are more than one; **firm age average is 12 years old; ***firm size average is 7 employees

In addition, the endogeneity test by means of a two-stage least square test (2SLS) was used to check the bias or inconsistent estimation of the independent variables (i.e. network centrality, network density, tie strength) (Wooldridge, 2015). The values of all multiple R scores in four possible scenarios are below 0.5, indicating a weak correlation (Wooldridge, 2015). Thus, we conclude that there is no endogeneity problem in the three network characteristics (Table 6).

Furthermore, the goodness of fit of the model is represented by the scores of the average path coefficient (APC = 0.29; $p < 0.001$), average R -square (ARS = 0.49; $p < 0.001$), average adjusted R^2 (AARS = 0.48; $p < 0.001$) and GoF = 0.53. Based on these results, the proposed conceptual model is considered strong (GoF ≥ 0.36). In general, we conclude that the proposed model has a good and robust prediction that can be used to further analysis.

Hypothesis testing

Table 7 summarizes all the hypothesis testing results. The effect of network centrality on firm performance is significant ($\beta = 0.148$, $p = 0.040$). The effect of network density on performance is also significant ($\beta = 0.462$, $p < 0.001$). In addition, the effect of tie strength on firm performance is significant ($\beta = 0.272$, $p < 0.001$). We conclude that network centrality, network density and tie strength directly affect firm performance (Model 1); hence, $H1a$, $H1b$ and $H1c$ are supported.

Testing the hypotheses on the role of moderating effect (i.e. age of the firm), the regression test results show that the effect of network centrality on firm performance is stronger among

Variables	Operational definition	Item	CFA*	Cronbach's alpha	References
Network centrality	The extent to which focal actors occupy a strategic position in the network based on involvement in many significant ties	Four-items adapted from Kim and Lee (2018)**	SJ1: 0.741 SJ2: 0.682 SJ3: 0.702 SJ4: 0.704	0.667	Wasserman and Faust (1994)
Network density	The extent of interconnection between actors in the network	Four-items adapted from Kim and Lee (2018)**	KJ1: 0.805 KJ2: 0.808 KJ3: 0.841 KJ4: 0.767	0.820	Gnyawali and Madhavan (2001)
Ties strength	The level of strength of a relationship measured by the interaction frequency, emotional intensity, intimacy and reciprocal service	Four-items adapted from Liu et al. (2011)**	KIF: 0.766 KITI: 0.827 KITJ: 0.756 KITL: 0.796	0.794	Granovetter (1973)
Firm performance	A set of financial and non-financial indicators that assess the extent to which organizational goals and objectives achievement	Six-items adapted from Kim and Lee (2018)**	KP1: 0.775 KP2: 0.762 KP3: 0.775 KP4: 0.496 KP5: 0.364 ^{nv} KP6: 0.630	0.730	Kaplan and Norton (1992)
Firm age	Time length of the existence of a firm	0 = younger firms < 12 years old, N = 80 1 = older firms ≥ 12 years old, N = 54	–	–	Jiang et al. (2011)
Firm size	The number of resources owned by a firm and the costs associated with its operations	0 = smaller firms < 7 employees, N = 98. 1 = larger firms ≥ 7 employees, N = 36	–	–	Radipere and Dhlwayo (2014)
Ethnic group	Informal social network with some characteristics such as the same mother tongue, regional origin and birthplace	0 = Javanese, N = 34 1 = Minang, N = 100	–	–	Zaheer et al. (2009)

Notes: *Confirmatory factor analysis, factor loading ≥ 0.4 is valid ([Hair et al., 2014](#)); ^{nv}, not valid; **five-points Likert scale (1 = strongly disagree; 5 = strongly agree)

Table 4. Measurements

younger firms ($\beta = 0.612; p < 0.001$) than older ones ($\beta = 0.371; p = 0.001$). The path coefficient value of the effect of network density on firm performance is also stronger among younger firms ($\beta = 0.686; p < 0.001$) than older ones ($\beta = 0.602; p < 0.001$). In addition, the path coefficient value of the effect of tie strength on firm performance is stronger among younger firms ($\beta = 0.563; p < 0.001$) than older ones ($\beta = 0.312; p < 0.001$). Overall, the results support *H2a, H2b* and *H2c* (Model 2).

The hypotheses under *H3 (H3a, H3b, H3c)* relate to testing the effect of the size of the firm (Model 3). The findings in Table 7 show that the path coefficient value of the influence of network centrality on firm performance is stronger in larger firms ($\beta = 0.627; p < 0.001$) than smaller ones ($\beta = 0.462; p < 0.001$). Hence, *H3a* is not supported. The path coefficient value of the influence of network density on firm performance is found to be stronger in larger firms ($\beta = 0.744; p < 0.001$) than smaller ones ($\beta = 0.600; p < 0.001$). The effect of tie strength on firm performance is stronger in larger firms ($\beta = 0.635; p < 0.001$) than smaller ones ($\beta = 0.469; p < 0.001$). Therefore, *H3b* and *H3c* are not confirmed.

The last testing of *H4a, H4b* and *H4c* compare the effects of network centrality, network density and tie strength on the performance of firms belonging to the two ethnic groups (Model 4). The findings show that the influence of network centrality on firm performance is stronger among the Javanese ethnic enterprises ($\beta = 0.662; p < 0.001$) than the Minang ones ($\beta = 0.437; p < 0.001$). The effect of network density on firm performance is also found to be stronger among the Javanese ethnic enterprises ($\beta = 0.707; p < 0.001$) than the Minang ones ($\beta = 0.633; p < 0.001$). Likewise, the effect of tie strength on firm performance is also stronger among the

Table 5.
Descriptive statistics
and correlation
analysis

Variables	Mean	SD	Age	Correlation coefficient			TS	FP
				Size	NC	ND		
Age	12.052	10.675	1	0.632**				
Size	7.126	9.733	0.632**	1				
Network centrality (NC)	3.619	0.991	-0.051	0.021	1			
Network density (ND)	4.203	0.792	-0.062	0.000	0.478**	1		
Ties strength (TS)	4.024	0.607	0.031	-0.056	0.235**	0.274**	1	
Firm performance (FP)	3.967	0.789	0.135	0.071	0.431**	0.461**	0.471**	1

Note: **Correlation is significant at 0.01 level

Table 6.
Endogeneity test
result of network
characteristics

Simulation set	Multiple R scores*
Scenario 1 (NC = dependent; ND = predictor; TS = instrumental)	0.239
Scenario 2 (NC = dependent; TS = predictor; ND = instrumental)	0.258
Scenario 3 (TS = dependent; NC = predictor; ND = instrumental)	0.258
Scenario 4 (TS = dependent; ND = predictor; NC = instrumental)	0.232

Note: *Multiple R scores > 0.5 is considered a strong correlation

Type of conceptual model	Hypotheses	Effects	β	p^*	Findings	Conclusions
Model 1	<i>H1a</i>	NC → FP	0.148	0.040	Significant, positive	Supported
	<i>H1b</i>	ND → FP	0.462	<0.001	Significant, positive	Supported
	<i>H1c</i>	TS → FP	0.272	<0.001	Significant, positive	Supported
Model 2	<i>H2a</i>	NC → FP	0.612	<0.001	Significant, positive	Supported
		Younger firms	0.371	0.001		
	<i>H2b</i>	ND → FP	0.686	<0.001	Significant, positive	Supported
		Younger firms	0.602	<0.001		
	<i>H2c</i>	TS → FP	0.563	<0.001	Significant, positive	Supported
		Younger firms	0.312	0.006		
Model 3	<i>H3a</i>	NC → FP	0.462	<0.001	Significant, positive	Not supported
		Smaller firms	0.627	<0.001		
	<i>H3b</i>	ND → FP	0.600	<0.001	Significant, positive	Not supported
		Smaller firms	0.744	<0.001		
	<i>H3c</i>	TS → FP	0.469	<0.001	Significant, positive	Not supported
		Smaller firms	0.635	<0.001		
Model 4	<i>H4a</i>	NC → FP	0.662	<0.001	Significant, positive	Supported
		Javanese	0.437	<0.001		
	<i>H4b</i>	ND → FP	0.707	<0.001	Significant, positive	Supported
		Javanese	0.633	<0.001		
	<i>H4c</i>	TS → FP	0.621	<0.001	Significant, positive	Supported
		Javanese	0.454	<0.001		
		Minang				

Notes: * p is significant at 0.05 level; NC: network centrality; ND: network density; TS: ties strength, FP: firm performance

Table 7.
Hypothesis test
results

Javanese ethnic enterprises ($\beta = 0.621$; $p < 0.001$) than the Minang ones ($\beta = 0.454$; $p < 0.001$). Therefore, *H4a*, *H4b* and *H4c* are supported.

In searching for an additional explanation of the role of moderating variables on the effect of network characteristics on firm performance, a level of involvement in the ethnic community, which represents the family bond believed to have an impact on the interaction, was analysed. The level of involvement in the ethnic community is measured by the length of membership, the position of management, the number of activities participated in, the frequency of attendance and attendance in other communities. The level of involvement is treated as a control variable (high vs low), as shown in [Table 8](#). A high level of involvement matters when the ethnic enterprise is older. Such involvement strengthens the firm's central position and good relations among members of the ethnic community by sharing knowledge and experience. As a result, the firm's performance improves.

Type of conceptual model	Effects	β		t^*	Conclusions
		High involvement**	Low involvement**		
Model 2	NC → FP	0.624	0.633	-0.039	Not different
	Younger firm				
	ND → FP	0.685	0.809	-0.767	Not different
	Younger firms				
	TS → FP	0.587	0.575	0.069	Different
	Younger firms				
	NC → FP	0.455	0.235	0.983	Different
	Older firms				
	ND → FP	0.736	0.160	2.672	Different
Model 3	Older firms				
	TS → FP	0.454	0.573	-0.579	Not different
	Older firms				
	NC → FP	0.641	0.402	1.461	Different
	Smaller firms				
	ND → FP	0.671	0.346	1.967	Different
	Smaller firms				
	TS → FP	0.565	0.409	0.939	Different
	Smaller firms				
	NC → FP	0.365	0.849	-1.969	Not different
Larger firms	ND → FP	0.560	0.892	-1.486	Not different
	TS → FP	0.537	0.816	-1.222	Not different
	Larger firms				
	Larger firms				

Notes: NC: network centrality; ND: network density; TS: ties strength; FP: firm performance; t^* is the result of regression difference test by using pooled standard error method as suggested by Kock (2013). Negative t -values means no difference; **the high (low) involvement group standard is the length of joining > 10 years (≤ 10 years); position as a supervisor/core administrator (member); very often/often participate in gathering activities and/or cultural activities (rare); joined ≤ 4 other communities (>4 communities); and using two interaction media, both physical and online meetings (using one) (N-high = 71; N-low = 63)

Table 8.
Multigroup
regression test of
control variable for
model 2 and 3

In terms of the effect of tie strength on firm performance, a high level of involvement matters in younger ethnic enterprises. Younger firms use their active involvement in the kinship network as initial capital (endorsement) to reduce the liability of newness when initiating relationships with external partners. When enterprises are older, the level of involvement no longer matters because ethnic enterprises are already known and now focused on maintaining existing relationships.

The findings in Model 3 (firm size) indicate that the high level of involvement matters in smaller firms because, at this stage, the ethnic enterprises must try hard to overcome their lack of internal resources. Being actively involved in the ethnic community enables them to overcome these small liability issues, which ultimately helps boost performance. When ethnic enterprises grow bigger, differences in the level of involvement no longer matter because ethnic companies are already relatively stable in terms of resource sufficiency.

Furthermore, the Mann Whitney test was used to test the difference between the ethnic value of Javanese and Minang groups (between) and the quality of ethnic community involvement within the groups (within high vs low) (Zimmerman, 1987). The test results of Model 4, as displayed in Table 9, based on the high and low involvement categories, show only small or non-substantial differences. Firstly, there is a difference in tie strength

Table 9.
Mann Whitney test
result of model 4

Between-group (Javanese vs Minang) on high-involvement level					
Network characteristics	Mean	Difference	Mann Whitney score	Asympt. sig score	
	Javanese	Minang			
Network centrality	39.09	35.43	3.66	296	0.58
Network density	35.05	36.18	-1.13	319.5	0.86
Ties strength	36.73	35.87	0.86	322	0.89
<i>Between-group (Javanese vs Minang) on low involvement level</i>					
Network centrality	35.11	30.21	4.9	388.5	0.304
Network density	27.76	34.44	-6.68	362.5	0.158
Ties strength	38.98	27.99	10.99	299.5	0.01**
<i>Within-group (Javanese, high vs low)</i>					
Network Characteristics	Mean		Difference	Mann Whitney score	Asympt. sig score
	High	Low			
Network centrality	20.14	16.24	3.9	97.5	0.28
Network density	20.09	16.26	3.83	98	0.28
Ties strength	14.5	18.93	-4.43	93.5	0.21
<i>Within-group (Minang, high vs low)</i>					
Network centrality	55.78	42.58	13.2	883	0.02**
Network density	51.56	48.91	2.65	1136.5	0.65
Ties strength	51.26	49.36	1.9	1154.5	0.73

Note: **Difference at 0.05 level

between the Javanese and Minang at the level of low involvement, particularly in two items: “frequency” and “commitment level of business reciprocity”. Compared to two other items that are not different (level of intimacy and sincerity), these two items seem to be the key differentiators of Javanese and Minang behaviour related to how often they are in touch with and keep promises with various business partners. At the low level of involvement in ethnic communities, Minang ethnic enterprises may communicate more frequently and build reciprocal relationships aggressively with business partners (calculative-based networks). No difference is found in two other items, “level of sincerity” and “level of intimacy” because the two ethnic groups seem to build a similar degree of closeness with their external partners.

Another finding is that there is a difference in the network centrality among fellow Minang groups (high vs low involvement), especially in the items of “the enterprise is a place to ask about business information” and “the enterprise has a close relationship with other ethnic enterprises”. The Minang ethnic enterprises in the high involvement group seem to be positioned as opinion references. This result also confirms the large disparity value in the mean scores between network centrality and the rest of the network characteristics.

Discussion

This study has confirmed that network characteristics (i.e. network centrality, network density and tie strength) significantly influence a firm’s performance. Central ethnic enterprises in ethnic communities get strategic information earlier than peripheral actors and use it for performance improvement (Das and Goswami, 2019). The next finding is that the denser the network, the higher the firm’s performance. The majority (71.2%) of respondents who belonged to an ethnic community claimed to have high attendance at the various activities held. The high

attendance strengthens ethnic ties, allowing for the smooth flow of abundant information and knowledge (Woolcock and Narayan, 2000; Szkudlarek and Wu, 2018). Knowledge is the fundamental fuel that drives firm performance (Grant, 1996).

In addition, the current study has revealed that the stronger a firm's ties with various business partners, the higher its performance. Strong ties with business partners generate trust and mutual understanding, which are fundamentally needed in the knowledge acquisition process for performance improvement (Rost, 2011; Liu *et al.*, 2017). Both ethnic enterprises established strong ties with various business partners such as customers, suppliers, competitors, banks and platform companies (i.e. Gojek and Grab).

The influence of network characteristics on firm performance is stronger in younger firms than older ones. Therefore, a younger or newly established firm is thought to use the right strategies to reduce the liability of newness in terms of gaining legitimacy and trust (Pfeffer and Salancik, 2003; Kim, 2018). One of these is to contribute actively as an administrator in a cohesive network or to engage in every activity. Active involvement in an ethnic community can provide vital information, which is necessary to run a new business operation such as ethnic business opportunities or consumer behaviour in the host area.

Young enterprise owners can also depend on their successful fellow ethnic entrepreneurs to get legitimacy and resource support (Wang, 2015; Yang and Aldrich, 2017). The consequence is that the younger enterprise owners have to be voluntarily under the control of the resource providers. This kind of relationship is beneficial for newly established firms to overcome the liability of belonging to a minority community in the host area. However, as business experience and bargaining position increase, older ethnic enterprises should build an interdependent relationship with business partners, placing trust and power-sharing as the foundation.

Next, in contrast to the proposed hypothesis, this study finds that the effects of network centrality and density on firm performance are stronger in larger enterprises than smaller ones. The majority (71.2%) of enterprise owners claimed that they often participate in ethnic community activities. In addition, 24 firm owners have a very central role in their communities as either an advisor or core administrator. When this central role and participation frequency data are further checked in the sample group of larger enterprises ($n = 36$), it appears that the majority (29% or 85.2%) of firm owners have a high attendance rate (very often and often) for participating in ethnic community activities. In this sample group, 11 firm owners play a central role as advisors or core administrators.

This data reveals that larger firms do not drastically reduce their central role and active involvement in ethnic communities. A possible explanation is as follows: when an enterprise grows, its bargaining power increases because its resources increase. Consequently, other members of the ethnic community become more dependent on the larger firm. Instead of trying to reduce its central role to seek new knowledge sources from other external networks, this situation strengthens the firm's position in the ethnic community. As a result, the owner might obtain more strategic information to beat the competition and achieve performance excellence (Aktamov and Zhao, 2014).

Moreover, a high frequency of meetings in an ethnic community allows for an intensive process for its members of getting to know and trust each other that generates a deep sense of belonging among them. This solidarity might make the larger firms' owners prioritize prospective co-ethnic employees instead of trying to recruit them from open networks (Fitrimawati *et al.*, 2015). Reflecting on this finding, the larger ethnic enterprise owners can act as caregivers or mentors for the nascent ethnic entrepreneurs in the ethnic community. Creating new entrepreneurs is no longer solely the role of the government but is (and should be) a joint task with grassroots communities, including ethnic communities.

The effect of tie strength on firm performance is found to be stronger for larger firms than smaller ones. Exploring the firms' network data further, the majority (75%) of the larger firms ($n = 36$) retained strong ties with the five parties mentioned earlier and only a few (26%) enterprises added strong ties with other parties such as the government. Related to this fact, [Aldrich and Auster \(1986\)](#) explain that larger firms tend to be resistant to change because they avoid uncertainty. Meanwhile, changes in a firm's network configuration are uncertain because it is not easy to build trust with other external parties who have never been related ([Aldrich and Auster, 1986](#); [Granovetter, 2005](#)). Instead of trying to forge new ties with other parties, a firm might end up with nothing because trust is not successfully built. Therefore, in the context of this study, the firms might place greater importance on the network configuration stability by maintaining strong ties with established business partners.

However, in terms of strong ties, [Gulati et al. \(2000\)](#) warn that knowledge shared in this kind of network tends to be homogenous, which can disrupt firm performance in the long run. Given this warning, the larger ethnic enterprise owners should consider establishing weak ties with various parties (e.g. the government or other platform companies) as sources of new and diverse knowledge. In other words, an ethnic enterprise should have network ambidexterity or should exploit the established network and explore new network configurations simultaneously. These actions require mindfulness so that changes in network configuration do not interfere with firm performance. In addition, this study finds that the level of involvement in an ethnic community matters in revealing more detailed behaviour in both firm age and size phases.

Finally, the findings of the present study confirm that the influence of network centrality, network density and tie strength is stronger in Javanese ethnic enterprises than in Minang ones. Pioneering a business in the Minang culture is less risky than the Javanese culture because it is possible to obtain resources from a cohesive network (the ethnic community) and weak ties (external partners). In comparison, with the higher beta coefficients, the performance of Javanese ethnic enterprises is highly dependent on the stability of their own ethnic community. They exhibit a relatively less aggressive effort in building weak ties, which results in the unavailability of external resource backups.

The work of [Light and Dana \(2013\)](#) noted two sides of social capital in relation to the establishment of ethnic enterprise i.e. being a catalyst or suppressor. They introduced the cultural capital concept to have social capital in a more favourable mode for ethnic enterprises or the catalyst one. Our findings are in favour of theirs. We also found that the relationship between Minang people and Javanese kinship (or cultural capital) strengthens their ethnic social ties (or social capital). The current findings extend the understanding of a variety of interaction between the cultural capital and social capital that depends highly on their own ethnic values. The Javanese people tend to rely more on their own ethnic network compared to the Minang ones, meanwhile, the attachment of the Minang in that kind of network is not as deep as the Javanese due to their aggressiveness to explore new networks.

Concluding remarks, implications and suggestions for future research

The current study concludes that the effect of network characteristics in terms of centrality, density and tie strength is significant on firm performance. These effects on a firm's performance are unlike in the setting of different ethnic groups of enterprises (Minang-calculative based networks and Javanese-identity-based networks). Additionally, only the firm's age that moderates the relationship between the network characteristics and the firm's performance, while the size did not.

This study generates three theoretical implications and one practical implication. Firstly, this research contributes empirically by proving that ethnic communities and strong ties with business partners improve firm performance. Secondly, inspired by resource dependency and social capital theory, this study formulates three theoretical relationship phases in networking experienced by ethnic enterprises in accordance with their age increase, namely, dependence (controlled by resource suppliers), independence (possessing their own resources to increase bargaining position) and interdependence (collaborating with other parties for resource exchange). Thirdly, studying the embedded value in Java and Minang cultures has helped the researchers revealing two core cultural values i.e. identity-based network (Java) and calculative-based network (Minang). This classification could be investigated further in different contexts in terms of different ethnicities all over the world.

Regarding the practical implication, this study finds that although ethnic enterprises thrive and have sufficient resources, they do not significantly reduce their centrality and active involvement in their ethnic communities. Ethnic solidarity inspires the basis of this action. More specifically, the owners of Minang ethnic enterprises use their central role in the ethnic community as a way to seek and share resources for business development. In comparison, central enterprises in the Javanese ethnic community use their role to keep harmonious social relations instead of for business purposes. Thus, this study adopts the concept from [Nofiani et al. \(2021\)](#) which proposes a duality of the relationship between SMEs and their external networks. When SMEs still need access to resources and legitimacy from the central figure in the ethnic community (gatekeeper), having a close relationship with the gatekeeper is paramount. Conversely, ethnic SMEs should reduce the intensity of their relationship with the gatekeepers to prevent everlasting dependency when they have sufficient capabilities to grow and expand new networks.

As demonstrated by the demographic data, the current study finds that the majority (66%) of the Javanese ethnic enterprises surveyed did not join the ethnic community. We acknowledge that this finding presents a research limitation due to the logistical and data accessibility issues involved in investigating SMEs in Indonesia. However, we have mitigated the unbalanced numbers of the subsample between the Javanese dan Minang ethnic enterprises by conducting a Mann-Whitney test, which found no substantial difference. The findings related to the low membership in the specific ethnic community (the Javanese) need to be further investigated by conducting in-depth interviews. One plausible explanation that can be a point of departure for further study is that the type of kinship or relatedness felt by the Javanese is not as much as that of the Minang people (p. 16–17). Moreover, exploring ethnic enterprises' behaviour in their mature and declining phases is also an appealing research agenda.

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