

# Investigating the Differences of Small Enterprise Supply Chain Managements toward Financial Performance: The Influence of an Enterprise Supply Chain Management Strategy

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**Abstract**— The purpose of this study is to critically analyse the impact of demographic characteristics and the way investors choose risk (tolerance) toward financial performance as exemplary for the integrity of enterprise supply chain management upgrading strategies. The demographic characteristics of Micro Small Medium Enterprise supply chain managements (MSME) are assessed, which consist of the type of business, gender, age of owner, age of business, education, and experience. Risk tolerance is measured by assessing the choices of risk averters, risk neutrals, and risk seekers. This study is based on 579 questionnaires filled in by the owners or managers of MSMEs that obtain credit financing from banks in Central Sulawesi, Indonesia (Kota Palu, Sigi, Banggai, Donggala, Morowali, Parigi Moutong, and Poso). The results of this study show the demographic characteristics of the types of trading businesses that are risk seekers, which proved to be the highest type of business that can maximize their financial performance. Notably, males were shown to prefer being risk averse, compared to the majority of female respondents who were mostly risk seekers. Resultingly, many women have high financial performance due to being risk seekers compared to men. Both young and elderly entrepreneurs are more risk averse. The age of the business is still categorised at the stage of business development, it has not been proven to have a significant relationship to risk tolerance and financial performance. Moreover, this study reveals that education apparently has no significant relationship in choosing risk. Education also has no significant relationship to the achievement of financial performance. Experience is suggested to be the key that determines risk tolerance choices and the main determinants of achieving optimal financial performance. This study proves the behavior of MSME investors in choosing risk (risk tolerance) makes a difference in achieving MSME financial performance. Contrastingly exemplified by the higher the risk chosen, the higher the financial performance is received by MSMEs. The integrity of demographic characteristics, risk tolerance and financial performance is a breakthrough for MSMEs to nurture upgrades as an enterprise supply chain management upgrading strategy.

**Keywords**— Financial performance, risk tolerance, demographic characteristics, MSME, enterprise supply chain management upgrading, supply chain management

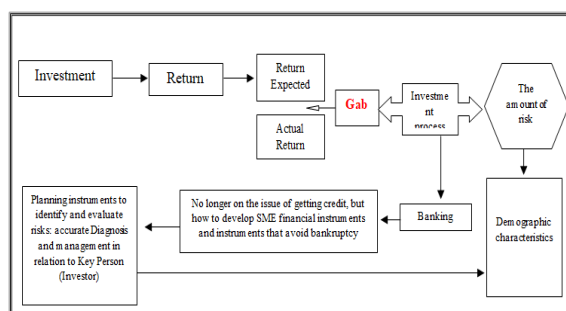
## 1. Introduction

There is a vast amount of business and economic literature that provide empirical findings suggesting that business units will naturally grow from small businesses to large businesses [1]. In the context of Micro, Small and Medium Enterprise supply chain managements (MSMEs), the idea of growth is translated as the idea of increasing the business class from a small business to a medium business, up until becoming a large business [2]. Furthermore, the concept of ‘graduating’ is not easily applied to MSMEs in Indonesia. The classic problem of MSMEs in developing their business is related to funding and marketing issues. It is emphasised the ability of MSMEs still depends on adequate funding [3]. The Indonesian government has provided solutions to this problem by providing commitment through Bank Indonesia (BI). Since 2018, Bank Indonesia has instructed banks to increase the portion of MSME loans to a minimum of 20% of total loans (<https://keuangan.kontan.co.id/news/banking-push-portion-credit-umkm-in-2019-this>). Although this supports government policy, SMEs as the main actors are not yet progressively participating in the competition [4]. The growth ability of MSMEs is highly dependent on the potential to invest, innovate, and qualify. In order to carry out the ‘grade-up’ strategy in line with the idea, namely ‘enterprise supply chain management upgrading’. Companies that can grow must prioritise the role of internal characteristics (entrepreneurs and companies), these characteristics are referred to as, ‘demographic characteristics’ [5].

Enterprise supply chain management upgrading strategy related to investment decisions

by SMEs as investors is closely related to sustainable business development. Sustainable business is in line with the theory of Resource-based View (RBV), which explains that above average financial performance as the long-term goal of the company is through profitability (financial performance) [6]. To achieve financial performance goals, companies use various inputs, such as financial resources (capital), human resources (labour), technology, network, etc [7]. The performance obtained is based on three main bases in investment decisions, which are related to the expected return, the level of investment risk, and the relationship between yield and risk. Decisions taken by investors are closely related to investor behavior towards risk. Investor behaviour obtains different business returns [8].

The main reason for investing is to make a profit (return). Investment returns consist of expected returns as well as realised returns (actual returns) [9]. The difference between the two returns is based on the amount of risk that must be considered in the investment process. Other factors considered in the investment process are related to the demographic characteristics of investors [10]. Furthermore, the most important problem in SMEs is no longer how to get credit, but how to develop financial solidity evaluation instruments in SME entrepreneurs and how to avoid bankruptcy problems [11]. Therefore, it is important to develop instruments that can identify and evaluate risk. The risk process no longer requires a risk avoidance strategy, but has to concentrate more on an accurate diagnosis and personnel management. The link between investment, return, risk and demographic characteristics is illustrated in Figure 1.



**Figure 1.** Investment Relations, Return, Risk and Demographic Characteristics

Investment selected by investors are strongly influenced by investor behaviour, which is defined to be investor attitudes towards the risks to be faced, whether investors like risk (risk seekers), avoiding risk (risk averter), or ignoring risk (risk in difference) [12]. Additionally, investor demographic factors are also suspected to affect investors in investing. The basis of investment decisions consists of the level of expected returns,

the level of risk, and the relationship between return and risk. The assumption model regarding investor preferences is only based on the expected return and risk of the portfolio that considers investors to have the same utility function [13]. Consideration of the Markowitz model is the value of the portfolio with the smallest risk for a certain expected return. Returns that are based on demographic characteristics are explained from Upper Echelon Theory. This theory suggest that organisations as a reflection of top management strategy highly depend on managerial background characteristics [14]. Managerial background is defined to be the demographic characteristics possessed by the leader, which are related to age, experience, education, social background, and economic conditions. Despite that group/environment where/he belongs and has a huge influence on the way entrepreneurs digest, analyse, and solve problems [15]. A study provides evidence that demographic characteristics affect company performance by influencing the decision-making process [16].

Based on observations that have been made both empirically and theoretically, it was revealed that Indonesia experiences a growing number of SMEs from year to year, but not on the growth of their businesses. The problem of MSMEs is not only in financing [17], but also on their sustainability. Previous research suggests a diagnosis related to key people who become human capital, namely demographic characteristics that can determine attitudes towards risk and achieve company goals (financial performance) in the long run [18]. This is according to the theory of enterprise supply chain management upgrading as a company's strategy to grow or 'grade up'. Therefore, our research objective is to explore the differences in MSME financial performance based on differences in demographic characteristics and differences in risk tolerance. The results of this study are expected to enrich knowledge on the growth strategy for MSMEs in Indonesia. We hope this research could help the government in developing a MSME growth program to reduce poverty levels and improve the Indonesian economy. This research is consistent with the literature on financial management and strategy management. Financial management focuses on investment and financial behavior whereas strategy management is related to the company's growth strategy (product life cycle) [19].

This study consists of five parts. First, the introduction explains the importance of this study and the relationship between variables. Second, a literature review is conducted by elaborating on the theory of upgrading, demographic characteristics, risk tolerance, financial performance, and research methodology in this study [20]. Third, the research method of this study is explained. Fourth, the result

of this study is explained and contains a descriptive analysis, crosstab results, Pearson chi-square results, and clarification of descriptive results with the theories and previous research. Finally, the paper is closed with conclusion and managerial implications [21].

## 2. Literature Review and Hypothesis

### Enterprise supply chain management Upgrading Strategy

Enterprise supply chain management upgrading lays out the important role about the internal characteristics of entrepreneurs and companies. In turn, the characteristics of entrepreneurs influence the tendency of companies to expand their business scale and scope. The characteristics of entrepreneurs include the age of the entrepreneur, gender, education and work experience, motivation, and ability to take risks. In terms of company characteristics, there is the age of the company [22], location, line of business, formality, financial access as well as the company's ability to identify, evaluate and utilise external knowledge for commercial purposes.

### Demographic Characteristics

Demographics as the study of everything encompassing human conditions and attitudes that can be measured, which includes changes in general, physical civilisation, intellect, and moral conditions. Investment is related to demographic factors like age, education, employment, income. Demographic characteristics in these regards is akin to its usage in social science studies. Related with the population of an area, whether a village, sub-district, district, province, or country. The demographic characteristics are the special characteristics of a population that is able to distinguish these populations with other residents in different regions [23].

The behavior of individuals is influenced by external variables that integrate with environmental factors that determine behaviour (demographics, personal characteristics, beliefs about objects, attitudes towards objects, task and situational characteristics).

This study takes research variables from Demographic Characteristics: Business Type, Gender, Age of Owner, Length of Business, Education, and Experience [24].

### Risk Tolerance

The basis of investment decisions depends on the level of expected returns, the level of risk and the relationship between return and risk. The investment decision process is an onward continuous decision process [25]. This consists of five decision stages that continue until the best

investment decision is reached. The five decision stages include: (1) Determination of investment objectives (2) Determination of investment policies (3) Selection of investment strategies and (4) Selection of assets. The selected investment and the amount of funds to invest is also greatly influenced by investor tolerance for risk, also called risk tolerance, which is the behaviour of the risks to be faced [26]. Risk tolerance is measured by whether the investor likes risk (risk seeker), avoids risk (risk averter), or ignores risk (risk neutral). Risk tolerance is a very strong predictor in investment decision making. The three types of investors will be very different in decision making and depends on the allocation of funds for investment. Risk perception is the result of many factors, which form the basis of differences in decision making towards possible losses [27].

### Financial performance

The central concept of entrepreneurship and the strategy management literature are ideas for constructing multidimensional performance. Especially for the dimensions of financial performance (financial performance) using the construct of profitability, growth, efficiency, financial structure, survivability, cash flow and resource accumulation [28]. In general, the measurement of SME business success is based on an assessment of financial performance. The indicator of financial performance used in this study is: 'Finance profitability' [29].

### Relationship between Demographic Characteristics and Risk Tolerance

Demographic characteristics have a high influence to risk tolerance because Upper Echelon Theory suggests organisations are a reflection of top management [30]. The choice of organisational strategy is predicted by the characteristics of the managerial background. Leaders play an important role in strategic decision making. The strategies chosen by leaders are a reflection of their values and cognitive ability. Their strategy relates to investor behavior in dealing with risk (risk tolerance). Some of these relationships have been tested, including the relationship of business types to risk. In regards to employment (type of business), certain occupational groups, e.g. corporate executives, avoid risk (risk averter) in investing [31]. The relationship between age and risk include the following demographic factors: age, which explains that usually younger investors will be riskier to take risks in investments than the unproductive or elderly, who do not dare to take risks in investing. Upper Echelon Theory suggests that age logically shows an accumulation of experience [32]. However, age correlates with the willingness and ability of leaders to face risk. Organisations with younger leaders tend to take

risky strategy choices. Older leaders, in addition to being burdened by their past experience that is not impossible to have been exposed to failure also have physical and psychological limitations and thus tend to avoid risk [33]. Moreover, education is a significant factor. In the study, 'Hunger for Risk: Education', Risk tolerance to also have a relationship with one's level of education. People who dare to take risks (risk aggressive) can be said to be highly educated because they have extensive knowledge and are able to calculate the risks faced [34].

Previous research provides an illustration that demographic characteristics have a relationship with investors' attitudes in choosing risks.

Hypothesis 1 (H1): There is a significant relationship between Demographic characteristics and Risk Tolerance.

### Relationship between Demographic Characteristics and Financial Performance

*The relationship between demographic characteristics and financial performance.* Resource-based View (RBV) theory explains that excellent performance in terms of output or profitability is one of the main goals of every company. In order to achieve these objectives, companies use various inputs, such as financial resources (capital), human resources (labour), technology, among others. Superior company performance depends on available resources, both tangible and intangible. RBV strongly highlights company resources that are unique, rare, and valuable, which lead to the company's competitive advantage [35]. The relationship between demographic characteristics and financial performance can also be seen from gender relations to performance. A study suggests gender diversity does not have an impact on company performance [36]. In a research study, it was found that women are more committed to their organisation compared to men.

*Relationship of Age to Performance.* A study shows that age is one of the factors that gives a good influence on the performance and organisational commitment towards employees in the organisation. The relationship of company age to performance study found there was a significant influence on the company's higher profits than the newly established company [37]. *Relationship of Education to Performance:* the better knowledge and intellectual experience found by an employee or human will make the task to be more easily done and be able to produce the best output. *Relationship of Experience to Performance:* Companies have a tendency to increase profits and have a tendency to do income smoothing due to the experience in managing their business. Furthermore, the

intellectual experience found by an employee or person willing to make the task can be easily done and able to produce the best output [38].

Several studies also found that there is a relationship between demographic characteristics and financial performance.

Hypothesis 2 (H2): There is a relationship between demographic characteristics and financial performance.

### Relationship between Risk Tolerance and Financial Performance

The assumption model regarding investor preferences, based on the expected return and risk of the portfolio chosen by the investor (small risk for certain expected returns) [39]. If investment is wanted, the person is referred to as an investor or a person who invests. Basically, there are three types of investors that when linked to the level of risk they can accept, (1) Risk averter, (2) Risk Neutral and (3) Risk Seeker.

Furthermore, investor attitudes can also influence financial risk and company performance.

Hypothesis 3 (H3): There is a significant relationship between Risk Tolerance and Financial Performance

Based on the previous research and the proposed hypothesis above, the following research model was developed in Figure 2. Demographic Characteristics, which consists of Business Type, Gender, Age of Owner, Business Age, Education, and Experience variables will have an influence on the risk tolerance and financial performance [40]. The type of risk tolerance adopted by entrepreneurs will ultimately influence their company financial performance and vice versa.

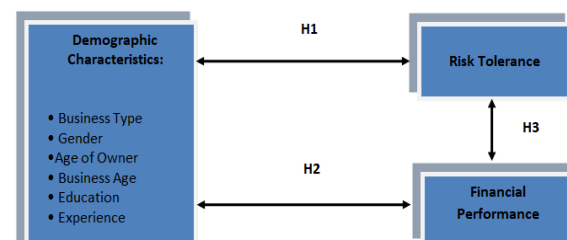


Figure 2. Research Model

## 3. Research Methodology

This study is based on a survey of 579 questionnaires filled in by owners and managers of MSMEs in Sulawesi. The populations in this study are MSMEs who obtain bank credit in Central Sulawesi (Kota Palu, Sigi, Banggai, Donggala, Morowali, Parigi Moutong, and Poso). Chi-Square

analysis was used to test the hypothesis proposed in this study, which is to find out whether there are significant differences in demographic characteristics, risk tolerance and financial performance. Demographic characteristics are measured by assessing the type of business, gender, age of owner, age of business, education and experience. Risk tolerance as a variable is the behavior of the risks to be faced (risk averse, risk neutral and risk seekers). Financial performance variables are measured by profitability.

#### 4. Results

To achieve research objectives related to demographic characteristics and how investors choose risk (tolerance) for financial performance, we did descriptive analyses, crosstab and Pearson chi-square testing. The results can be described as follows.

##### Type of Business and Gender

This study shows information about the types of businesses selected by investors that received bank credit financing are in the agriculture, industry, trade, services, fisheries and animal husbandry sectors. The dominant type of business is trading business (39.55%). From interviews conducted with the banks, they explained that more credit was approved by the trading business because it provided a fast cash flow to their business activities. This is followed by agricultural businesses (18.83%) and other service businesses (11.92%) (see Figure 5). In the area of gender, it was revealed there are more male investors (68.22%) compared to the proportion of female investors (31.78%). This is possibly because in Indonesia, especially in Central Sulawesi, the most work is dominated by men, who culturally are the breadwinners for their families.

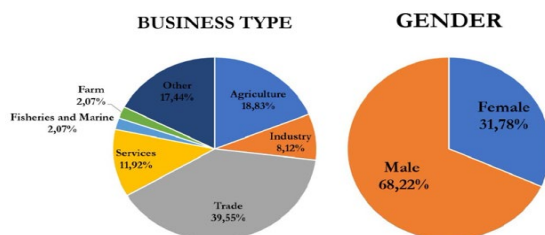


Figure 3. Business Type and Gender Descriptive

##### Age of Owner and Business Age

The dominant investor in this study are in the age of 31-40 years (43.70%). The length of their business was mostly 6-10 years (37.68%). The Second population is 0-5 years (28.32%), which is categorised as start up businesses.

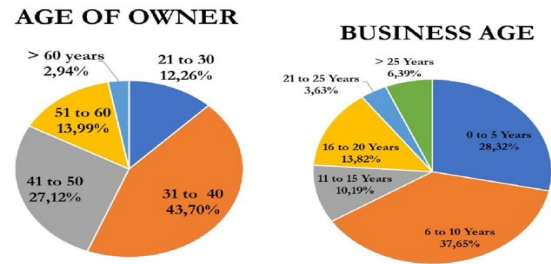


Figure 4. Descriptive Age of Owner and Business Age

##### Education and Experience

Notably, the majority of education is senior high school (43.52%) and the highest education is equivalent to S1/bachelor degree (10.19%). From 579 investors, there were only two investors (0.35%) who have never attended school. This is very plausible because knowledge is needed in risk management and investment decisions. Most of these investors (74.27%) already have accumulated experience in conducting business. Investors who have no experience consist of 25.73% of the total population. This illustrates that in managing funds obtained from banks, investors who have business experiences are more dominant. In general, banks provide credit assistance to businesses that have business experience, so that credit is given continuously over time.

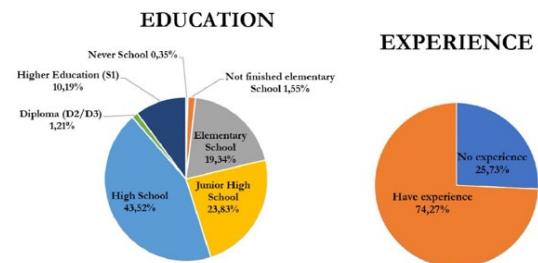


Figure 5. Education and Experience Descriptions

##### Risk Tolerance and Financial Performance (Profitability)

Investor behavior in deciding the risks were dominantly risk averters, which equalled to 305 investors (52.68%); and only 173 (29.88%) investors were risk seekers. While investors who obtain a maximum profitability of 20 million each year amounted to 319 MSMEs (55.09%), while only 48 MSMEs (8.29%) had a profitability of more than 100 million each year. Both of these contrastingly prove that the higher the risk or choosing a risk seeker, the higher the chance of return will be.

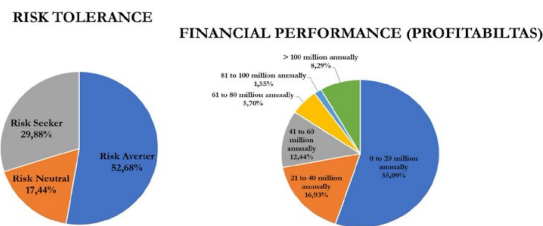


Figure 6. Risk Tolerance and Financial Performance Descriptions

### Crosstabulation of Demographic Characteristics of Risk Tolerance

Descriptive variables with crosstabulation illustrate the overall distribution of demographic characteristics based on each type of business, gender, age, age of business, education and experience, different attitudes in choosing risks (risk tolerance: risk averse, risk neutral and risk seeker), are presented in the following Table.

Table 1. Crosstabulation of Demographic Characteristics Against Risk Tolerance

Demographic characteristics	Risk Tolerance			Amount	
	Risk Averse (RA)	Risk Neutral (RN)	Risk Seeker (RS)		
<b>BUSINESS TYPE</b>					
Agriculture	1	91	3	15	109
Industry	2	29	8	10	47
Trade	3	67	49	113	229
Services (workshops, Kost, rice milling and coffee, restaurant, photocopy)	4	29	25	15	69
Fisheries and Marine	5	6	1	5	12
Farm	6	7	1	4	12
Other (furniture, tofu factory, mattress maker, Elekton, red sugar producer)	7	76	14	11	101
Total		305	101	173	579
<b>GENDER</b>					
Female	0	71	38	75	184
Male	1	234	63	98	395
Total		305	101	173	579
<b>AGE OF OWNER</b>					
21 to 30 years of age	1	35	14	22	71
31 to 40 years of age	2	140	34	79	253
41 to 50 years of age	3	80	32	45	157
51 to 60 years of age	4	41	17	23	81
> 60 years of age	5	9	4	4	17
Total		305	101	173	579
<b>BUSINESS AGE</b>					
0 to 5 Years	1	85	27	52	164
6 to 10 Years	2	117	42	59	218
11 to 15 Years	3	29	11	19	59
16 to 20 Years	4	44	13	23	80
21 to 25 Years	5	10	4	7	21
> 25 Years	6	20	4	13	37
Total		305	101	173	579
<b>EDUCATION</b>					
Never Schooled	0	1	0	1	2
Not finished elementary School	1	4	0	5	9
Elementary School	2	75	13	24	112
Junior High	3	74	22	42	138

School					
High School	4	117	54	81	252
Diploma (D2/D3)	5	4	2	1	7
Higher Education (S1)	6	30	10	19	59
Total		305	101	173	579
<b>EXPERIENCE</b>					
No experience	0	61	25	63	149
Have experience	1	244	76	110	430
Total		305	101	173	579

From Table 1, entrepreneurs who conduct trades are more risk seeking (113 respondents) compared to other industries, such as agriculture, which are mostly risk averse (91 respondents). This table reveals that most male respondents are risk averse (234 respondents). This is contrastingly different than female respondents who are more risk seeking (75 respondents) and they are some of the most risk averse (71 respondents). Entrepreneurs who range from 31 to 40 years old are risk averse (140 respondents), although some are risk seekers (79 respondents). MSME businesses aged 6 years to 10 years prefer to be risk averse. This table informs that even after the company is more than 25 years old, it prefers being risk averse. Another interesting fact in this finding is in education at the high school level, most of them choose to be risk averse (117 respondents) and some others (59 respondents) at the high school level have the courage to be in a risk seeker position. MSME entrepreneurs who have an experienced background (244 respondents) choose the risk averse position, compared to MSME entrepreneurs who do not have business experience (81 respondents) are dominant as risk seekers.

### Crosstabulation of Demographic Characteristics of Profitability

Descriptive variables with crosstabulation of demographic characteristics (Type of Business, Gender, Age, Age of Business, Education, and Experience) with financial performance of MSMEs are presented in the following Table.

Table 2. Crosstabulation Characteristics Demographics to Profitability

Demographic characteristics	Financial performance (profitability) (in millions) annually						Amount	
	0-20	21-40	41-60	61-80	81-100	>100		
<b>BUSINESS TYPE</b>								
Agriculture	1	9	3	4	0	0	3	109
Industry	2	3	5	6	1	1	3	47
Trade	3	6	4	4	2	6	36	229
Services (workshops, Kost, rice milling and coffee, restaurant, photocopy)	4	2	9	4	1	1	69	
Fisheries and Marine	5	7	2	1	1	0	1	12
Farm	6	7	2	2	1	0	0	12

Other (furniture, tofu factory, mattress maker, Elekton, red sugar producer)	7							
		7	1	2	4	1	4	101
Total		3	9	7	3	9	48	579
<b>GENDER</b>								
Female	0	7	3	3	1	2	17	184
		6	4	6	9			
Male	1	2	6	3	1	7	31	395
		4	4	6	4			
Total		3	9	7	3	9	48	579
		1	8	2	3			
<b>AGE OF OWNER</b>								
21 to 30 years of age	1	3	1	7	7	3	7	71
		3	4					
31 to 40 years of age	2	1	3	3	1	4	20	253
		4	9	1	3			
41 to 50 years of age	3	8	3	2	9	1	10	157
		6	1	0				
51 to 60 years of age	4	4	8	1	2	1	10	81
		7		3				
> 60 years of age	5	7	6	1	2	0	1	17
Total		3	9	7	3	9	48	579
		1	8	2	3			
<b>BUSINESS AGE</b>								
0 to 5 Years	1	8	2	2	1	3	13	164
		7	9	2	0			
6 to 10 Years	2	1	4	1	1	3	24	218
		2	1	8	2			
11 to 15 Years	3	3	1	7	4	0	6	59
		2	0					
16 to 20 Years	4	4	1	1	5	0	2	80
		6	3	4				
21 to 25 Years	5	1	2	5	1	1	1	21
		1						
> 25 Years	6	2	3	6	1	2	2	37
		3						
Total		3	9	7	3	9	48	579
		1	8	2	3			
<b>EDUCATION</b>								
Never Schooled	0	2	0	0	0	0	0	2
Not finished elementary School	1	4	0	1	1	0	3	9
Elementary School	2	7	1	1	6	1	7	112
		4	3	1				
Junior High School	3	8	2	1	9	2	9	138
		0	2	6				
High School	4	1	4	3	1	5	24	252
		2	6	5	4			
Diploma (D2/D3)	5	4	2	0	0	0	1	7
Higher Education (S1)	6	2	1	9	3	1	4	59
		7	5					
Total		3	9	7	3	9	48	579
		1	8	2	3			
<b>EXPERIENCE</b>								
No experience	0	6	2	2	1	7	15	149
		4	3	6	4			
Have experience	1	2	7	4	1	2	33	430
		5	5	6	9			
Total		3	9	7	3	9	48	579
		1	8	2	3			

From Table 2, it can be seen agricultural businesses (99 respondents) can achieve a maximum profitability level of 20 million a year, while trading businesses (36 respondents) can obtain a

profitability level of more than 100 million every year when compared to other businesses. Only 31 male entrepreneurs can reach a profitability level of more than 100 million a year, dominantly at a maximum profitability of 20 million a year (243 respondents). Whereas female entrepreneurs (17 respondents) are able to achieve profitability levels of more than 100 million rupiah each year. Furthermore, this study also reveals that MSME entrepreneurs who are in the age range between 31 years and 40 years (146 respondents) can obtain a maximum profitability of 20 million per year until 100 rupiah each year. This is the highest achievement compared to other ages. Contrastingly, MSMEs that have managed their business for 6 to 10 years are able to obtain a profitability level of a maximum of 20 million, some (24 respondents) reach more than 100 million rupiah each year. The findings specifically found that the level of diploma education (1) and having a degree of undergraduate education from tertiary institutions (4 responses) only achieved a small profitability level of more than 100 million rupiah. Compared to entrepreneurs who have a high school background (24 respondent), they can reach a profit level of more than 100 million rupiah. If an entrepreneur does not have background experience in his business (15 respondents), their profitability is less than 100 million rupiah each year. Entrepreneurs who have experience (33 respondents) can have profitability of more than 100 million rupiah.

### Crosstabulation Risk Tolerance to Profitability

In Table 3, the differences in attitudes in choosing risk (risk tolerance: risk averse, risk neutral and risk seeker) and its impact toward financial performance (measured by the level of profitability) is presented.

**Table 3.** Crosstabulation of Risk Tolerance to Profitability

Risk Tolerance		Financial performance (profitability) (in millions) annually					Amount	
		0-20	21-40	41-60	61-80	81-100		>100
Risk Averse	1	99	3	4	0	0	3	109
Risk Neutral	2	31	5	6	1	1	3	47
Risk Seeker	3	69	4	4	2	6	36	229
Total		319	98	72	33	9	48	579

The findings show that entrepreneurs who choose to be risk averse (99 respondents) can obtain a maximum profitability of 20 million per year. Whereas entrepreneurs who chose to be risk seekers (36 respondents) were able to achieve a

higher profitability level of more than 100 million rupiah each year. This study illustrates that a higher the risk correlates to a greater opportunity to get returns.

### Hypothesis Testing Results

Demographic characteristics are related to the variables of Business Type, Gender, Age, Business Age, Education, and Experience. While investor attitudes towards risk choices are referred to as risk tolerance variables measured by being risk averse, risk neutral, and risk seekers; whereas MSME financial performance is measured by profitability. To measure the hypothesis of a relationship between demographic characteristics and risk tolerance, the relationship of demographic characteristics with financial performance, and the relationship of risk tolerance with financial performance, the Pearson Chi-Square test was used. Standards of acceptance and rejection of the hypothesis is defined as if the significant value is  $< \alpha 0.05$  then  $H_0$  is rejected; and if a significant value is  $> 0.05$ , then  $H_0$  is accepted. Therefore, the results illustrate that a difference in crosstab testing will provide proof of the relationship between the measured variables. The test results are as follows.

**Table 4.** Statistical Test Results: Pearson Chi-Square

Hypothesis between Variables	Value	Sig. $\alpha$ 0,05	Decision
<b>H1.</b> Relationship between Demographic Characteristics and Risk Tolerance			
• Relationship between Business Type and Risk Tolerance	140,950 <sup>a</sup>	,000	Accepted
• Relationship between Gender and Risk Tolerance	22,445 <sup>a</sup>	,000	Accepted
• Relationship between Age of Owner and Risk Tolerance	5,455 <sup>a</sup>	,708	Rejected
• Relationship between Business Age and Risk Tolerance	3,311 <sup>a</sup>	,973	Rejected
• Relationship of Education and Risk Tolerance	19,554 <sup>a</sup>	,076	Rejected
• Relationship of Experience and Risk Tolerance	15,627 <sup>a</sup>	,000	Accepted
<b>H2.</b> Relationship between Demographic Characteristics and Financial Performance			
• Relationship between Business Type and Financial Performance	169,261 <sup>a</sup>	,000	Accepted
• Relationship between Gender and Financial Performance	31,522 <sup>a</sup>	,000	Accepted
• Relationship between Owner Age and Financial Performance	22,988 <sup>a</sup>	,289	Rejected
• Relationship between Business Age and Financial Performance	25,143 <sup>a</sup>	,454	Rejected
• Relationship of Education and Financial Performance	26,250 <sup>a</sup>	,662	Rejected
• Relationship of Experience and Financial Performance	28,018 <sup>a</sup>	,000	Accepted
<b>H3.</b> Relationship between Risk Tolerance and Financial Performance	559,446 <sup>a</sup>	,000	Accepted

Source: Processed Data, October 2019

According to Table 4, in the Pearson's Chi-Square test with  $\alpha = 0.05$ , the first hypothesis (H1) that the demographic characteristics have a significant relationship with risk tolerance is accepted, except the owner's age, business life and education. The second hypothesis (H2) test results proved that demographic characteristics have a significant

connection with the increase in financial performance and is also accepted, excluding the owner's age, business life and education. The third hypothesis test (H3) has a significant risk tolerance relationship with financial performance, it is seen the Pearson's Chi-Square amounted to 559.446 with a significance of 0.000; meaning there is a link between risk tolerance with financial performance and thus H3 is accepted.

## 5. Discussion

This study highlighted the fact that demographic characteristics and types of business will face different risks. In Table 1, it can be seen that all types of businesses (except trading) predominantly choose to be risk averse, while trading businesses mostly choose risk seekers. This is in line with a study, which says that certain jobs (e.g. corporate executives) are dominant in choosing risk averse positions in investing.

The relationship between type of business and financial performance has also proven to be significant, meaning there is a relationship between the different types of businesses in obtaining MSME financial performance. The type of business chosen by investors at MSMEs is trade dominant (39.55%). Trading business is categorised as a business that likes risk (risk seekers), and interestingly are the ones that obtain the highest profitability. Trade business can get a profit of more than 100 million rupiah each year. This is consistent with the opinion that the higher the risk taken, the higher the return obtained. Trading business in cash turnover is very high, originating from the high inventory turnover process. The type of business that is served the most by the banking sector is trade. The trading business in this study includes the sale of finished goods (kiosks), and goods produced from local commodities (chocolate, cloves, rice, rattan, and corn). In Indonesia, the volume of trading businesses managed by small businesses continues to increase, reaching 49.6% of the largest contribution of MSME GDP from trade, agriculture and processing industries. The trade sector is not only in the results of finished goods, but in the services and manufacturing sector.

The findings of this study significantly prove there is a relationship between male and female entrepreneurs in choosing different risks. The difference between deciding on risk is significantly related to profitability. Small risk, then obtains a return at a certain point (Markowitz's theory) as well as in this study, where a dominant entrepreneur is typically a man (68.22%) who positions himself as a risk averter, thus men get a maximum profitability of 20 million rupiah each year. This means that the higher the risk, the greater the chance of obtaining a return. Another



interesting finding is that the majority of women choose to be risk seekers, thus these high risk choices have an impact on the acquisition of high profitability also on MSMEs owned by women. The role of women in the development sector of UMKM undeniably has an active role in reducing poverty and goes together with the typical role of men as breadwinners. There were 17 female investors and 31 male investors who could earn profits above 100 million rupiah each year, while the rest were spread across several different profit categories. This study is not in line with the research, which states there is no influence of gender diversity on performance. This study enriches the findings, not only women who are committed to performance, but also for men who have a strong commitment to pursue organisational performance.

MSME entrepreneurs aged between 31 to 40 years at 43.70% are categorised to be at a productive age in doing business. At that age, the dominant choose to be risk averters and at that age can get a maximum profit level of 20 million rupiahs annually, while some MSMEs reach a profit level of more than 100 million rupiahs each year. This study cannot prove the relationship between owner's age and risk tolerance. This means that the age of entrepreneurs, both young and old, is not a guarantee for them to choose a higher risk. Internal and external conditions that can affect human capital (age) cannot be categorised as determining risk tolerance and financial performance. The upper echelon theory asserts that organisations led by young entrepreneurs will choose to be risk seekers whereas older leaders choose to be risk averse because of physical limitations, as well as the possibility of their psychological mindset that has experienced business failure. Research conducted, which confirms young entrepreneurs are more appropriate in choosing risk seekers. In fact, the results of this research are not the case, young and old-age entrepreneurs, dominant in choosing to be a risk averter.

The age of the business that has been initiated by MSME entrepreneurs is dominant between 6 to 10 years (37.65%). The business age category prefers to be in the risk averter position, with a maximum profit level of 20 million per year and some MSMEs earn more than 100 million rupiah each year. The test results found no significant relationship between differences in business age with risk tolerance and profitability. The results of this study are not able to explain the demographic characteristics (age of business) as a trigger for the choice of risk tolerance and profitability. It is possible that the age of the company is still at a developmental stage, business travel has not been able to maximise profitability, as said by Merry (2007) that the longer a company is established (the

older the company) proportionally impacts company profitability.

The educational background possessed by MSME entrepreneurs at the high school level (43.52%) proved to not have a significant relationship in choosing risk tolerance. The fact is that most investors who have an education choose to be risk averters whereas only a small portion choose to be risk seekers. People who dare to take risks are motivated by the higher education they have, but in the reality of this study, the relationship between education and risk tolerance was not found. Other findings explain that the knowledge (education) possessed by MSME entrepreneurs is unable to prove its relationship to profitability. The fact is that entrepreneurs with an elementary school education (7 MSMEs) and junior high school education (9 MSMEs) can benefit more than 100 million annually, compared to diploma-educated entrepreneurs (1 MSME) and college education (4 MSMEs) entrepreneurs, earning less profitability from 100 million rupiah every year. This means that with knowledge alone, it is not enough to guarantee entrepreneurs to achieve financial performance. There still are other external factors. Therefore, this research is not in line that the better the knowledge possessed by entrepreneurs, the better it produces output (performance).

The higher one's experience, the better in decision making and the impact on business returns. The experience in question is the business experience of the family or business experience of the business that has been done. The background of the entrepreneur's experience at UMKM was 74.27%, meaning that the entrepreneur had been engaged in his business based on the existing experience. Armed with existing experience, entrepreneurs can measure the risks faced and based on existing experience can produce optimal performance. Thus in this study, a significant relationship was produced between experience with risk tolerance and can prove the relationship between experience and achievement of financial performance (profitability). Experience is the best teacher, because in the business investment process, teaching knowledge to choose risk is the key to the success of the company [41].

Investor demographic factors are also suspected to affect investors in investing. The basis of investment decisions consists of the level of expected returns, the level of risk, and the relationship between return and risk. The assumption model regarding investor preferences is only based on the expected return and risk of the portfolio that considers investors to have the same utility function. Returns that are based on demographic characteristics are explained from Upper Echelon Theory. This theory was developed argued that organisations as a reflection of top management chose organisational strategy and part

of the level of performance predicted by managerial background characteristics. This explanation is in accordance with the research that was carried out in accordance with the theory of Markowitz, upper echelon theory and RBV theory. Overall the results of this study relate to the demographic characteristics of the type of business, gender and experience giving evidence that has a significant relationship with risk tolerance. Thus the research supports the research that was conducted, which gives the result that the demographic characteristics have a relationship with the attitude of investors in choosing risk.

The demographic characteristics found in this study give the meaning of the different types of businesses (mainly trading), gender and experience, able to provide a significant relationship to differences in the acquisition of MSME profitability levels. The results of the study support the demographic characteristics relationship with financial performance.

The selected investment will have an impact on risk and return, while the selected risk will have an impact on the return achieved. The findings of this study support Markowitz's theory and upper echelon theory. The results of this study prove that differences in risk tolerance have a significant relationship with differences in the level of profitability obtained. Actors who choose to be risk averters (99 people) reach a maximum profitability level of 20 million rupiahs each year, in addition to entrepreneurs who choose to be risk neutral (31 people), the dominant gain level of profitability is a maximum of 20 million rupiahs annually. While the majority of MSME entrepreneurs at 229 people choose to be risk seekers, they can get a profitability level of more than 100 million every year. This proves that the higher the level of risk will have an impact on the acquisition of a higher return.

Therefore, it can be concluded that the findings of this study are: (1) there is a significant relationship between demographic characteristics (type of business, gender and experience), which has a relationship in determining risk tolerance; (2) a significant relationship between demographic characteristics (type of business, gender and experience) and has a relationship in determining financial performance; (3) The existence of a risk tolerance attitude has a relationship in optimising financial performance because it is proven to significantly mean that the higher the risk faced, the higher the rate of return (profitability) will proportionally be.

The exportation of differences in financial performance based on the characteristics of demographics and risk tolerance was proven to be a growth strategy or a 'grade-up' strategy for the development of MSMEs in Indonesia. These three integrities are collectively called, 'Enterprise

supply chain management Upgrading Strategy'. This study is limited in regards to testing differences and the significance of variables. It is expected that in subsequent studies, conducting research by taking interval scale data, to ensure it can conduct tests that can predict the influence between variables. In addition, further research will further develop and correlate external factors that can affect MSME financial performance.

## 6. Conclusion

*Theoretical Implications:* The results of the study prove that the association of demographic characteristics will cause differences in risk tolerance and financial performance. Integrity among the three is a formulation forming the 'Enterprise supply chain management Upgrading Strategy', which would develop the science of financial management and strategy management. The study is in line with the concept of Resources Based-View (RBV), Upper Echelon Theory and Makowitz theory.

*Practical Implications:* MSMEs as investors become significant human capital in intangible assets. A manager can make their personal resources related to knowledge, education and their ability to develop an intuition in making risk decisions faced and produce improvement in the financial performance of their business. Furthermore, this research provides information to policy makers, especially the government regarding the importance of intangible investment, which is the basis of demographic characteristics as a basis for risk tolerance and financial performance improvement. This is integrated into a 'grade-up' or 'Enterprise supply chain management Upgrading Strategy' strategy as an effort to develop MSMEs in Indonesia.

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