

Rewards Effects Through Entrepreneurial Orientation to the Performance of the Indi 4.0 Manufacturing Industry

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Abstract

Purpose: The main intention of this study is to better comprehend the potential of rewards, entrepreneurial orientation (EO), and their impact on the performance of Indonesian manufacturing firms transforming into Industry 4.0.

Design/methodology/approach: This study achieved its objectives by conceptual analysis of the rewards relationship with the performance of an organization, expectancy theory, resource-based view (RBV) theory, and extant literature.

Findings: This study indicates that a comprehensive rewards policy alone is insufficient to improve the performance of the Indonesian manufacturing industry. The fully mediating models hypothesised with the application of expectancy theory and RBV models suggested that the dimensions of EO have significant impacts on improving the performance of the manufacturing firm.

Practical Implications: This study measures the adoption of EO as a mediator in examining the mechanism of rewards management to improve the performance of the manufacturing industry underpinned by the expectancy and RBV theories.

Originality/Value: The originality of this study is to demonstrate that the implementation of rewards management in the Indonesian manufacturing firm can be enhanced using a proper mechanism, to improve better firm's performance.

Keywords: Rewards, Manufacturing Industry, Entrepreneurial Orientation, Organizational Performance, INDI 4.0, Indonesia.

1 Introduction

The essential of every industrial revolution is the challenge to boost the productivity of the existing industries and create new opportunities for securing firms' sustainable growth. In the 4th industrial revolution era, not only the production process will be affected, but also more extensive to the other parts of the business processes. In particular, the product innovation and development processes. While most studies about the latest industrial revolution discuss the technical aspects, little attention has been made to the managerial perspective (Mohelska & Sokolova, 2018). The management approach and organizational impact can be explored in-depth to contribute to the success of the Industry 4.0 transformation. A managerial topic such as human resources, although the need to discover people's roles is identified by most of the authors, is still understudied. However, the importance of a secondary aspect like this is crucial for the correct adoption of Industry 4.0 and the correlated performance expectation of firms (Mohelska & Sokolova, 2018). Piccarozzi et al. (2018) suggested that Industry 4.0 is entitled to a formulation of committed strategy, in the light of an adaptation period of organizational changes and

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different aspects. Hence, the challenge of implementing Industry 4.0 from the human resource and organization perspective is to develop the capabilities of continuous innovation and learning.

According to the report of the United Nations Economic and Social Council (2020), “Global growth in manufacturing had already steadily declined even before the outbreak. The pandemic is hitting manufacturing industries hard and causing disruptions in global value chains and the supply of products”. This implies that the Covid-19 pandemic which affected the global economy badly has made the effort to regrow the manufacturing sector across the world even harder than it was before. Although the share of manufacturing in the GDP of least developed countries has increased from 10% in 2014 to 12.4% in 2019, the growth rate was too slow to double the industry’s contribution to GDP by 2030, as mandated in the United Nations’ Sustainable Development Goals (UN-SDGs) (United Nations Economic and Social Council, 2020). In line with the UN’s SDGs progress report, the country members of the Association of South-East Asian Nations (ASEAN) also face the stagnancy in the growth of manufacturing contribution to their GDP in the year 2016 to 2018 (The ASEAN Secretariat, 2020). As the biggest economy in ASEAN, the decline of Indonesia’s manufacturing sector contribution to the country’s GDP in the recent years has a significant effect to the stagnancy of the overall ASEAN countries’ figure.

While ASEAN is already a major manufacturing hub, the application of disruptive technologies like big data and the internet of things (IoT) are recommended as a development that could stimulate substantial growth in the related sector. Fifteen per cent of ASEAN respondents in a survey done by McKinsey Productivity Sciences Center in 2014 said they were optimistic that the implementation of new technologies could improve the forecasting accuracy which will lead to a further increase in their revenue and efficiency (Tonby et al., 2014). However, most of the manufacturing firms in ASEAN are still slow in implementing disruptive technologies in their operations. Among the ASEAN countries, Indonesia was placed in the middle position for readiness in technology implementation. The score of Indonesia in the technological readiness was 3.9 out of 5 according to the report made by the World Economic Forum (Schwab, 2018), which is considered low for the implementation of Industry 4.0.

Reward systems are the fundamental factor in the relationship between employees and organizations. The main objectives of rewards are to attract and retain qualified employees and align their performance with the organization’s strategy (Armstrong & Murlis, 2007). Some remarkable studies since decades ago have indicated positive relation between rewards and a firm’s performance (Hannan, 2005; Kruse et al., 2008; Lazear, 2000; Levine, 1992; Solow, 1979). Nevertheless, no single approach to the reward-performance mechanism can be universally applied in different contexts. Meanwhile, EO is a potential mediator of the reward-performance relationship since it is not only a significant outcome variable of rewards (Baskaran et al., 2018; Naksung & Piansoongnern, 2020; Urban & Verachia, 2019) but also a significant predictor of organization’s performance (Amin et al., 2016; Lee et al., 2001; Rauch et al., 2009; Wang & Yen, 2012). Since the mechanism of how HR practices (specifically total reward practices) antecede the organizational outcomes remain unclear (Hanci-Donmez & Karacay, 2019; Savaneviciene & Stankeviciute, 2010), in-depth observation of the EO’s mediation role between rewards and OP can be seen as the attempt to elucidate further the aforementioned link age. This study attempts to formulate the strategy from the management studies approach by analysing the role of entrepreneurial orientation in the firms transforming into Industry 4.0. A conceptual framework of the study will observe the relevance of rewards and entrepreneurial orientation to be adopted in the Industry 4.0 environment, and its impact to the firm’s performance. The Indonesian manufacturing firms was chosen as the context for this study, since the studies about rewards-

organizational performance (OP) conducted previously in Indonesia were mainly at firms in agriculture, service, and academic sectors.

This paper is structured in three sections. The first section discusses the research issues, questions, and objectives of this study. Meanwhile, the second section explains the literature review, underpinning theories, framework, and derived hypotheses of this study. The final sections cover the discussion, implications for future study (theoretically and practically), and conclusion of this paper.

2 Problem statement

Several research gaps have been identified from the overview of the related literature associated with the present study. The starting point of this research focused on rewards and organizational performance topics. Rewards, either in the form of both non-financial or financial, have attracted much attention from various scholars for a relatively long period as it possesses a crucial role in the overall success of one organization (Das & Mohapatra, 2014). However, previous researches often view rewards as a dependent variable (outcome) rather than a predictor or antecedent variable (Gerhart & Milkovich, 1992). The literature of previous studies on the rewards topic has indicated positive relation between rewards and a firm's performance (Hannan, 2005; Kruse et al., 2008; Lazear, 2018; Levine, 1992; Solow, 1979; Vroom, 1964).

The first theoretical gap identified in the previous studies review is the lack of in-depth analysis of reward systems in both real organizational context and scholarly research about rewards practice (Deadrick & Gibson, 2007). While the large volume of practitioner-focused literature reflects the managerial emphasis on rewards practice, this level of attention is far exceeding that in academic literature. The academic literature often treats reward systems as a component in the bundle of human resources management (HRM) practices when analysing the HRM-performance link (Becker & Gerhart, 1996; Delery & Doty, 1996; Huselid, 1995). The preference for observing rewards as part of the HRM practices bundle has led to the failure to address this specific component more precisely (Delery, 1998; Jiang et al., 2012; Laundon, 2018).

The study about rewards-performance also has a strong geographical and economic context focusing on North America and Europe, thus it would be a significant contribution when the related research can be extended to the emerging market countries in another region (Xavier, 2014). This is supported by the view that culture introduces significant comprehension of cross-border dissimilarities that can exist in the perceptions of employees about the performance implications of financial and non-financial rewards (Chiang & Birtch, 2012). The Indonesian manufacturing firms were chosen as the context for this study since the studies about rewards-organizational performance (OP) conducted previously in Indonesia, were mainly at firms in the agriculture, service, and academic sectors. For instance, the study conducted by Maharani et al. (2020) was taken place in an Indonesian service firm while the study by Rinny et al. (2020) was done in an Indonesian university. Thus, very rare literature has been found about related studies in the Indonesian manufacturing sector. In particular, those transforming into Industry 4.0. The different cultural backgrounds will lead to the difference in perceptions of an employee associated with motivation triggered by various types of rewards. It is one aspect that deserves more attention in the reward-performance study domain. Therefore, the present research aims to fill the gap by examining the differences in reward practices and OP in the context of manufacturing firms in Indonesia.

Numerous researches have contributed to the view that Human Resource (HR) practices are positively related to performance in the past two decades (Arthur, 1994; Huselid, 1995). Nevertheless, the mechanism of how HR practices antecede the organizational outcomes remains unclear (Hanci-Donmez & Karacay, 2019; Savaneviciene &

Stankeviciute, 2010) since most of the previous studies did not discuss any mediators to elucidate the linkage between HR practices and organizational performance (Becker & Gerhart, 1996; Harney & Jordan, 2008; Sobaih et al., 2019). The gap of lacking understanding of the mediating variables and their impact on the HRM-performance link is referred to as the “black box” phenomenon (Boselie et al., 2005; Sobaih et al., 2019).

The second gap is the extension of previous studies by proposing entrepreneurial orientation (EO) as a potential mediator variable. Based on the available literature, previous studies mostly investigate either the relationship between rewards and OP or between EO and OP. Attempts done recently by several scholars have investigated the role of EO as the mediator between the link between rewards as part of Human Resources Management (HRM) practices and a firm’s performance (Hanci-Donmez & Karacay, 2019; Moustaghfir et al., 2020; Zehir et al., 2016; Zhu et al., 2018). However, an in-depth examination of the relationship between rewards (as the construct with non-financial and financial aspects), and OP with EO as a mediator should gain further attention (Dulebohn & Werling, 2007; Zehir et al., 2016). The reward is a crucial factor to achieve strategic goals for the entrepreneurially oriented firm (Zehir et al., 2016), and an improper plan of it may influence entrepreneurial activities negatively (Balkin & Logan, 1988).

The last gap identified, is the attempt of this research to examine the relationships between individual components of rewards (non-financial and financial) and EO as a multidimensional construct, an extension of the previous study conducted by Baskaran et al. (2018) which elucidated the role of reward as a predictor of multi-dimensions EO (i.e., innovativeness, risk-taking, and proactiveness). In the perspective of EO as a multidimensional construct of innovativeness, risk-taking, and proactiveness (Baskaran et al., 2018; George & Marino, 2011; Wiklund & Shepherd, 2005), EO’s dimensions may differ independently though they are interconnected to each other (George & Marino, 2011; Wang, 2008; Wang & Yen, 2012). The differences depend on the environmental, cultural, and institutional situations when a firm penetrates a new market (Rauch et al., 2009; Zhao et al., 2011).

Recent studies have recognized that one of the factors limiting Indonesia’s economic performance is the lack of dynamism in the country’s manufacturing industries (Asian Development Bank, 2020). This is indicated by the lesser manufacturing sector’s share in Gross Domestic Product (GDP) and stagnancy in productivity growth. A decrease in manufacturing’s share means that the workforce has been moved toward less productive sectors, while a stagnancy of labour’s productivity in the sector represents lower competitiveness of human resources. As technology and innovation have been proven historically as the key drivers of economic growth and structural changes, a technological transformation should be implemented to play a critical role in re-discovering Indonesia’s growth potential (Asian Development Bank, 2020). As the cheap and massive labour force is not the propelling factor of economic growth anymore, the industries’ transition to the next level modes of work should be initiated. This initiative requires an upgrade in both organization and technological capabilities (Asian Development Bank, 2020). New technologies should be adopted to increase the sophistication of industries and at the same time, the quality of exports. Hence, firms are enabled to utilize resources efficiently and innovate new products to gain new market access. The ability of firms to proactively explore opportunities offered by the emergence of new technologies will boost both competitiveness and productivity of Indonesia’s manufacturing sector (Asian Development Bank, 2020). By all means, the introduction and adoption of the fourth industrial revolution to Indonesia’s businesses and industries.

In the INDI 4.0 assessment conducted on 326 companies from cross-sectors industries by Indonesia’s Ministry of Industry to assess the level of the country’s manufacturing industries to cope with the technical requirements of industry 4.0, the overall average value of readiness scored at 2.14. This result indicates that many efforts still must be exerted to be compliance with Industry 4.0. INDI 4.0 has a 0 to 4 score levels range, with

the following meaning: level 0 for unready to transform to Industry 4.0, level 1 for initial readiness phase, level 2 for moderate readiness, level 3 for mature readiness, and level 4 for full compatibility with Industry 4.0 requirements. For the readiness of management and organization, which includes 3 criteria: strategy and leadership; investment to transform into Industry 4.0; and innovation policy, the average level was scored at 2.12. This result indicates that the management and organization of the manufacturing companies have just started the transformation into Industry 4.0. The measurement of people and culture readiness which includes: the development of competency; culture; and openness to changes, was scored at 2.16. This result reflects the fact that the people and culture of the surveyed companies have been in the early stage of transformation to be Industry 4.0 ready. This offer an opportunity to conduct a comprehensive study about how to lift the readiness of organizations and human resources in Indonesian firms to comply with the Industry 4.0 environment, in terms of product innovation and productivity performance (Asian Development Bank, 2020).

3 Research Questions

1. What is the level of reward practices implemented in Indonesian manufacturing firms?
2. Do rewards have a significant effect on the performance of Indonesian manufacturing firms?
3. Do rewards have a significant effect on initiating the entrepreneurial orientation (EO) of employees in Indonesian manufacturing firms?
4. Does entrepreneurial orientation (EO) have a significant effect on the performance of Indonesian manufacturing firms?
5. What is the extent of entrepreneurial orientation (EO) mediation in the relationship between rewards and the performance of Indonesian manufacturing firms?

4 Research Objectives

The main purpose of this study is to better comprehend the potential of rewards, entrepreneurial orientation, and their impact on the performance of Indonesian manufacturing firms transforming into Industry 4.0. This study has established the following research objectives:

1. To measure the level of reward practices implemented in Indonesian manufacturing firms.
2. To examine the significant effect of rewards on the performance of Indonesian manufacturing firms.
3. To examine the significant effect of rewards initiating the entrepreneurial orientation (EO) of employees in Indonesian manufacturing firms.
4. To examine the significant effect of entrepreneurial orientation (EO) on the performance of Indonesian manufacturing firms.
5. To determine the mediating role of EO in the relationship between rewards and performance of Indonesian manufacturing firms.

5 Theoretical foundations and proposed research model

Rewards are particular financial compensation, object, or event that employees receive in return for their work or accomplishments (Schultz, 2006; Suri, 2016). Pavlov (1927)

supported by Skinner (1953) revealed that when a reward is provided after the occurrence of a behaviour, the probability of that behaviour occurring again increases. Nonetheless, the second inception of rewards is related to the subjective perception of liking, pleasure, or satisfaction (Schultz, 2006), also referred to as the hedonic functions of rewards. Thus, employees execute something because the job is rewarding and generates a pleasant experience. The first explication of rewards is used to be referred to as extrinsic rewards, while the second definition is commonly referred to as intrinsic rewards (Deci & Ryan, 2000). Both types of rewards have an important role in attracting and retaining each individual while affecting employees' motivation significantly. The term total reward was first introduced in 1990 as a holistic approach to work-related returns (Sedlak, 2015). WorldatWork (2000) defined total reward as "all the tools that employer can use to attract, retain, motivate, and satisfy employees". Another approach made by Franco-Santos & Gomez-Mejia (2015) defines total reward as the mechanism that comprises extrinsic and intrinsic rewards adopted by the employer to motivate, attract, and retain employees.

WorldatWork (2000) distinguish types of total reward into three groups: compensation, benefits, and work experience. Compensation is the basic (foundational) rewards that are financially based in nature and satisfy the monetary needs of employees. Benefits are the rewards to satisfy the protection needs of employees and be provided on a non-performance based. Work experience is the relational need, which binds employees to the firm stronger due to their satisfaction of individual needs like personal development and fulfilment. However, most leading HR firms and reward practitioners have developed their model of total reward with similar kinds of approaches to reflect their interpretation of the idea and its link to building a healthier psychological contract between employer and employees (Armstrong & Murlis, 2007). Brown & Armstrong (1999) introduced a model that distinguishes between transactional rewards, which are financial (thus imitable by competitors) but also essential for employee recruitment and retention, and relational rewards, which are non-financial (such as work experience, learning, and development) to enhance the value of transactional/financial rewards essentially.

Kuratko et al. (2005) have suggested that rewards and reinforcement issues for the implementation and use of a framework that analyzes incentive-based performance systems while emphasizing the significant accomplishments of employees to motivate employees to undertake more demanding or entrepreneurial oriented work. In addition, Rouniasi & Farah (2013) emphasized that performance-based rewards and reinforcement programs play an important role in involving workers in meaningful accomplishments in the pursuit of difficult work. Rewards and reinforcements would typically be drawn and placed into operation in a company to reward success, significant accomplishments, and significant contributions. Typically, the development of entrepreneurial propensity among employees will not evolve before employees believe that they will be compensated appropriately (Baskaran et al., 2018). Recognizing their remarkable participation or outstanding entrepreneurial achievement is what staff anticipates in the pursuit of being entrepreneurial, while Moghaddam (2017) argues that incentives may not have a significant impact on the decision-making practice of attempting new challenges in one's work. Salvato (2004) found that incentive programs that compensate workers favorably correlated with their entrepreneurial orientation. The literature in Entrepreneurship has shown that, for a company to promote entrepreneurial thinking among workers, an appropriate compensation structure should be in place that considers individual accountability, their priorities, and the resulting input driven by results-based compensations. They could be in the form of monetary, rank and influence, career and individual growth, or psychological stimulators; self-realization, confidence and social rewards-i.e., sense of belonging and fellowships (M. H. Morris & Kuratko, 2002).

A review of previous literature done by Kuratko et al. (2004) concluded that the appropriate use of rewards is necessary for the activation of entrepreneurial orientation

among employees (Barringer & Milkovich, 1998; Block & Ornat, 1987; Covin & Miles, 1999; Kanter, 1985; Kuratko et al., 2001; Sathe, 1985; Scanlan, 1981; Souder, 1981; Sykes, 1992). Analysis conducted by Twomey & Harris (2000) concluded that the rewards system and the intrapreneurial actions of workers interact positively, demonstrating that a successful reward program encourages entrepreneurial tendencies. This finding justified the application of the expectancy theory in explaining the relationship between expectancy, the ability to achieve goals, and the outcome of entrepreneurship (Barba-Sánchez & Atienza-Sahuquillo, 2017). Nonetheless, rewards do not always have to be in the form of financial or monetary. Burns (2008) appended several other types of reward, such as credibility earnings, better working circumstances, access to useful information, and the ability to take on a bigger responsibility are often highly appraised by workers as incentives. Hence, the reward infrastructure of modern organizations can be classified into two main categories, financial and non-financial (Armstrong & Murlis, 2007; Milkovich & Newman, 1999).

Entrepreneurial Orientation (EO) is described as a multi-dimensional strategic construct that represents the extent to which firms are innovative, risk-taking, and proactive in their behaviour, practices, and decision-making activities (Covin & Slevin, 1989; Miller, 1983). In other words, the construct represented by EO extends beyond local boundaries and is practised for value generation within one organization (Hanif et al., 2018). According to Edwards (2014), EO refers to the combination of processes, practices, and decision-making styles of organizations with entrepreneurial characters. EO has gained significant theoretical and analytical attention in the field of organizational behaviours. It has emerged as one of the most common recognized organization level constructs in entrepreneurship literature (Gupta & Batra, 2016), and one of the most researched topics in the entrepreneurial study (George & Marino, 2011). Of the various topics of study regarding entrepreneurship, EO is one of the few topics that possess the body of knowledge accumulation in its progress (Covin & Lumpkin, 2011; Rauch et al., 2009; W. Wales et al., 2011). The EO construct provides fills a remarkable gap in the literature, as the existence of EO elaborates the character of entrepreneurship practice in the firm (Covin & Lumpkin, 2011).

According to Ireland et al. (2009), EO is a status representation of a firm which can be defined by several behavioural dimensions. There are two perspectives which dominated the discussion in the literature: a single dimension approach, proposed for the first time in the publication of Miller (1983) and a multidimensional approach. The latter is typically aligned with the proposal of Lumpkin & Dess (1996). For the single dimension perspective, the EO is measured from three viewpoints (Covin & Slevin, 1989; Miller, 1983): innovativeness, risk-taking and pro-activeness. The Lumpkin & Dess (1996) research introduces competitive aggressiveness and autonomy to the three original components and suggests the multidimensional construct. Latter research by Anderson et al. (2015) describes the conceptualization of EO as “a multidimensional construct consisting of two non-interchangeable dimensions: entrepreneurial actions (innovativeness and pro-activeness) and risk-taking management, which the co-existence of both are necessary for the validity of EO”.

Entrepreneurship research has evolved in the organizational context since the influential work of Miller (1983). In their literature study, Rauch et al. (2009) concluded that EO is the organizational performance's significant driver. Despite some constraints to be considered in this linkage, the literature shows the relevance of EO, both theoretically and in organizational practice (Andersén, 2010).

Organizational Performance (OP) is defined as the capability and ability of one organization to exploit the available resources efficiently to accomplish the set objectives of the firm while also considering their relevance to customers (Peterson et al., 2003; Taouab & Issor, 2019). Performance is characterized by the extent of accomplishment of work-related tasks (Hanif et al., 2018). Organizations can obtain better outcomes when

employees achieve their job-related goals (Lumpkin & Dess, 1996). This was supported in a study by Hanif & Gul (2016), which found that employee job targets decide business performance. Hence, Organizational Performance is the organization's ability to accomplish its goals by skilfully utilizing its resources. Organizational Performance is a critical factor in determining why some companies thrive and others decline (Adam, 2018). Therefore, the entrepreneurs, managers, and executives to recognize their organization's performance level to take necessary actions in progressing forward, as OP will have an impact on the organization's competitiveness. However, it is not a simple task to define, conceptualize, and evaluate performance, given the condition that organizational researchers have diverse performance opinions and definitions (Barney, 1991). In early research, organizational performance was commonly observed as financial performance in terms of profitability and growth (Gomes et al., 2004). Profitability, return on investments (ROI), return on assets (ROA), and return on equity (ROE) are some examples of financial performance measures (Lo et al., 2016). In addition to profitability, another essential business performance measure is growth. Growth is a crucial performance element to firms, particularly small and medium firms as it is a precise, more available, and more accessible indicator of performance compared to the measures of accounting (Wiklund, 1999). Meanwhile, (Barkham et al., 1996) concluded that sales growth is a preferred indicator by entrepreneurs. However, Mohd Harif et al. (2012) argued that because of the recent business environment, firms not only get involved in the financial competition, but are also assessed by non-financial indicators which count on factors such as customers, employees, suppliers, and the wider scope of community.

Organizational Performance is perhaps the most regularly used dependent variable in organizational research to date. Meanwhile, it remains one of the most ambiguous and inconsistently defined constructs. Defining organizational performance is an exceptionally open-ended topic, with few studies using clear definitions and measures (Singh & Gupta, 2016). However, its appropriateness is certainly presumed no matter what form (Richard et al., 2009). Rogers & Wright (1998) stated that a major challenge for performance study is to develop an obvious, coherent, and consistent organizational performance construct. By the economic considerations, organizational performance has become an important research variable that has consequences not only for organizational-level processes but also for the modelling of individual and group-level processes. Thus, performance can be elucidated according to various points of view. Nonetheless, identifying what can be measured is not the current primary challenge, identifying what is needed to be measured as the concentration points are crucial instead (Powell, 2004). If performance is defined as an individual level construct, the related measurement will be at the individual level. When the performance is seen as a group-level construct then it can be measured by variables that can be examined and computed at the group level. Eventually, if the focus is an organization or firm-level performance, it will be measured using firm-level variables such as return on investment (ROI), return on asset (ROA), or other non-financial indicators. Although all three approaches to describing and examining performance are applicable and reasonable, the present study focuses on organizational-level conceptualization and measurement of performance.

Regarding the operationalization of performance in manufacturing firms, Zack et al. (2009) as cited by Al-Tit (2017) recommended three OP indicators as the baseline for competitive advantage, namely customer intimacy, product leadership, and operational excellence. Product leadership applies to product and service innovation as the base of competition. Customer intimacy concerns the competition in terms of customer satisfaction and retention level. While operational excellence refers to competition determined by outcome value of efficiency generated from internal processes. Since the key issues of this study are to address the lack of products and services innovation outcome and relatively low readiness for industry 4.0 transformation in manufacturing firms in Indonesia, the measurement of Organizational Performance will be focused at those three indicators proposed by Al-Tit (2017) represented by a single construct of the

organization-level performance. The combined examination of financial and non-financial performance indicators is supported by several scholars such as Mohd Harif et al. (2012), Ramayah et al. (2011), and Chien (2014).

5.1 Expectancy Theory

The expectancy theory of Motivation was first introduced by Victor Vroom in 1964 (Lunenburg, 2011). The assumption that our behaviour is formed by making a conscious choice from a set of possible alternative behaviours, is the basis of Expectancy Theory. According to Expectancy Theory, the behaviour a person develops will always be one that maximizes his/her satisfaction and minimizes discomfort.

According to Klitzner & Anderson (1977), the motivation triggered by the process described in Vroom's expectancy theory is seen as a result of three factors multiplication. Kreitner & Kinicki (2013) defined expectancy theory as the view of motivating people to behave in a pattern that produces targeted combinations of predicted results. Hence, motivated behaviour is viewed as goal-oriented when explaining the expectancy theory. The intensity of a propensity to behave in a certain manner depends on the intensity of confidence that the manner will be compensated by a given result and on the attractiveness of that result to the individual (Robbins & Judge, 2013). People made choice from the available alternatives consciously, and the choices are systematically related to psychological processes, particularly perception and the formation of beliefs and attitudes (Pinder, 1984).

The Expectancy Theory Model (also known popularly as VIE model) defined motive force as the result of three factors: expectancy, instrumentality and valence. People will be motivated when they are convinced that effort will lead to performance (expectancy), they can see a distinct relation between performance and certain results (instrumentality), and the results are preferable for them (valence). The lack of motivation will take place due to the loss of any aforementioned factor. Every person came with a distinctive combination of valence, instrumentality and expectancy (Luthans, 2005). Van Eerde & Thierry (1996) conducted a meta-analysis of seventy-seven empirical researches done before 1990, which examined the predictions of expectancy theory. On contrary, only ten similar studies can be found since 1990. The decrease in research on expectancy theory leads to the assumption of the theory's maturity (Ambrose & Kulik, 1999). In the study about employee motivation in the hotel industry, Chiang & Jang (2008) proposed the modified expectancy theory model, which splits the valence and instrumentality factors into the extrinsic and intrinsic parts. Until recent years, the expectancy theory's VIE model is still applied consistently by researchers to understand motivation in different areas of management (Chopra, 2019).

5.2 Resource-Based View (RBV) Theory

The theory of Resource-Based View (RBV) was first initiated by Penrose (1959) in her book 'The Theory of the Growth of the Firm'. From the view of this theory, firms can be superior and unrivalled by others through a set of unique internal resources. In other words, RBV focuses on the organization's internal aspects, i.e., internal resources and capabilities to determine its value and profit (Barney, 1991). Hence, the resource base of one firm is the antecedent to its competitive advantage. Nevertheless, RBV holds the assumption of firms have heterogeneous resources with imperfect mobility from time to time (Peteraf, 1993). According to Wernerfelt (1984), increased resources have a significant effect on an organization's performance given that the resources are valuable, rare, inimitable, and non-substitutable. Resources owned by one firm should be valuable for exploiting opportunities or anticipating threats from competitors. Meanwhile, the resources must also the rare ones so that they are difficult to acquire by the competitors. Furthermore, resources should be inimitable which means: (1) they are dependent on unique historical conditions; (2) they have causally ambiguous relationship with the firm's competitive advantage; and (3) they are creating competitive advantage of the firm

that is knowledge-based or socially complex. As the last condition, the resources must be non-substitutable by having no strategic equivalents. Thus, no strategically equivalent resources which has same value, but they are rather not rare and imitable (Barney, 1991).

The development of an organization's unique resources and capabilities defined in RBV theory is associated properly with the dimensions set described in the EO construct (Nasution et al., 2011). This offers the basis for strategic planning in one business as one organization needs an entrepreneurial set of behaviours to find new opportunities, adapt to changes, and take the consequences of the decisions made (Tajeddini & Tajeddini, 2008). EO construct consists of three main dimensions-i.e., innovativeness, risk-taking, and proactiveness which focus on the organization's internal capabilities. The dimensions in the EO construct manifest the internal capabilities aspect of one organization. Higher management capability of one organization will lead to stronger resource-performance relationships (Lahiri et al., 2012). Hence, distinctive EO behaviours are valuable, rare, inimitable, and organizational non-substitutable. Hence, the RBV theory can be implemented as an underpinning theoretical foundation when explaining the relationship between EO and OP. A certain level of EO may be regarded as one organization's intangible asset that can contribute to the improvement of the firm's performance.

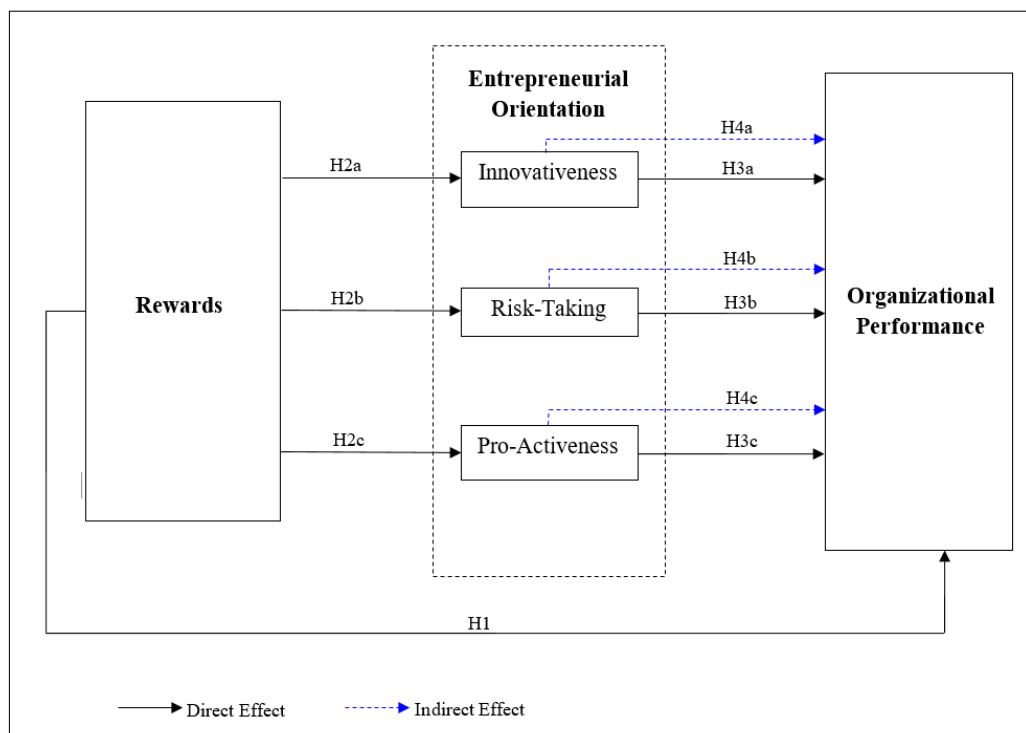


Figure 1 Conceptual framework developed from extant literature

6 Research Hypotheses

6.1 Rewards and Organizational Performance (OP)

The mutually beneficial relationship between employees and employers depends heavily on the proper compensation system (Ko et al., 2020). Compensation is the primary source of the employees' income, which has an impact on their attitude and behaviour during employment in organizations. From the view of employers, a strategic factor in human resource management like a compensation system will affect the firms' products/services competitiveness in the market, capability to attract and retain talents, and eventually the operational costs. Hence, it is a fundamental task to observe the relationship between employees' compensation and the performance of a firm or organization. Despite the

limited availability of data, the empirical findings from scholars like Hannan (2005), Kruse et al. (2008), Lazear (2000), Levine (1992), and Solow (1979) have indicated a positive relationship between financial rewards and an organization's performance. The development of literature with empirical evidence of the linkage between rewards and organizational performance has further explicated Vroom's (1964) expectancy theory which illustrates that an employee's motivation is a result of a person's expectation process of transformation to become work performance, to obtain the desired rewards because of the achievement.

According to Armstrong & Taylor (2014), total reward management is an integrated component of the human resource management (HRM) strategy to improve productivity in one organization. Total reward management involves the design, application, and review of a rewards system that facilitates the performance improvement of the organization, group, and individual. Odunlami & Matthew (2014) in their study about the effect of compensation management on employees' performance in the Nigerian food and beverage manufacturing industry have probed that the reward system has a significant impact on the productivity of employees, and eventually contributes to the overall performance of a firm. Thus, the finding is aligned with the indication found by Rayton (2000) that high-performance firms tend to implement and maintain performance-based compensation systems. The study conducted several years later by Suri (2016) also supported the view that an organization's pay and reward system has a positive impact on employees' performance, which finally increase the organizational performance in term of profitability. Rewards also have an impact on employees' attitudes and behaviours toward the organization where they are employed (Chiang & Birtch, 2012). From the view of employers, rewarding is one of the crucial factors impacting the businesses' operational costs, and eventually, the competency to improve organizational performance (Chia et al., 2016).

H1: Rewards have a significant effect on Organizational Performance (OP).

6.2 Relationship between Rewards and Entrepreneurial Orientation (EO)

Precise adoption of rewards can stimulate entrepreneurial behaviours among employees in one firm (Barringer & Milkovich, 1998; Block & Ornati, 1987; de Jong & Wennekers, 2008; Kanter, 1985; Naksung & Piansoongnern, 2020; Sathe, 1985; Sykes, 1992; Urban & Verachia, 2019). Chandler et al. (2000) and Hayton (2005) reported results that the reward system positively affects innovation, thus reinforcing innovative practices. An essay by Cherry (2019) and Lazear (2018) supported this by adding that in identifying a particular desired behaviour, a reward may be considered positive reinforcement. Daniels & Daniels (2006) implied that positive reinforcement may have characteristics such as personal, immediate, delivered regularly, and earned, but not necessarily in monetary form. Creating a reward system that emphasized outcomes with attention to significant achievement and constantly unlocking an employee's competency is seen as a catalyst in triggering the entrepreneurial orientation of the employee (Baskaran et al., 2018).

Twomey & Harris (2000) proposed that a value-based reward system motivates employees to perceive effectively the existing internal and external contexts, allowing employees to recognize new opportunities, thereby making continuous improvements to maximize the firm's value. Therefore, scholars argue that an efficient compensation system would help promote entrepreneurial behaviours among employees, in the proactiveness to manage different circumstances based on the observation of the internal and external environment. The adoption of a proper compensation system is expected to motivate middle managers and build their willingness to be innovative and proactive while anticipating a certain level of risk when acting entrepreneurially. Thus, there is a strong correlation between rewards and employees' entrepreneurial orientation when a compensation system is implemented to come up with employees on a value-added basis to the firm (Salvato, 2004). Rewards are one of the most crucial components of

incorporating Entrepreneurial Orientation, as they act as the link between an individual and the organization's strategic goals (Hornsby et al., 2009).

H2a: Rewards have a significant effect on Innovativeness.

H2b: Rewards have a significant effect on Risk-Taking.

H2c: Rewards have a significant effect on Proactiveness.

6.3 Relationship between Entrepreneurial Orientation (EO) and Organizational Performance (OP)

EO can be defined as firm-level entrepreneurship and is a significant factor in one firm's outcome (C. Lee et al., 2001). In this study, as already mentioned in the EO section, the construct's multi-dimensional approach will be focused on three components, namely innovativeness, risk-taking, and proactiveness (Baskaran et al., 2018; Covin & Lumpkin, 2011; Miller, 2011). Covin & Slevin (1991) with Lumpkin & Dess (1996) were the authors who have pioneered the derivation and investigation of EO's significant effect on a firm's performance, conceptually and empirically. Furthermore, there are several empirical studies (Lumpkin & Dess, 2001; Wiklund & Shepherd, 2003, 2005) which examined the positive implications of EO on a firm's performance. Thus, the relationship between EO and an organization's performance has become the focus of interest while studying EO (Covin et al., 2006). EO also has been repeatedly one of the strongest variables to predict organizational performance (Rauch et al., 2009), since being an entrepreneur and controlling the firm's performance need the competency of EO.

In the review of research development on EO, Martens et al. (2016) analysed that one of the most studied themes about EO's contribution to organizational practice is the research on the impact of EO on performance. Gupta & Batra (2016) in the study to investigate the EO-performance link among 198 Indian small and medium-sized enterprises (SMEs), revealed a significant positive impact of EO on a firm's performance. However, among rapidly emerging major economies, only China has received attention consistently regarding the influence of EO on OP (W. J. Wales et al., 2011). In the earlier time, EO was assumed as a universal concept across all cultures although entrepreneurial propensity may not be as influential in emerging economies due to the notable differences in the institutional situation across countries (S. M. Lee & Peterson, 2000). Another study about the impact of EO on OP in an emerging economy context has been done by Martin & Javalgi (2016). The study was conducted by collecting data from 260 international new ventures (INVs) in Mexico, which also showed that EO has a positive link to the performance of Mexican INVs. A similar study at the same period time in the Malaysian SMEs has been conducted by M. Amin et al. (2016), which proposed that market orientation (MO) was partially mediating the significant indirect linkage between EO and OP.

H3a: Innovativeness has a significant effect on OP.

H3b: Risk-Taking has a significant effect on OP.

H3c: Proactiveness has a significant effect on OP.

6.4 Mediating Effect of Entrepreneurial Orientation (EO) in the Link between Rewards and Organizational Performance (OP)

The current study also proposed to investigate the role of EO as a mediator in the linkage between Rewards and Organizational Performance (OP). According to Baron & Kenny (1986), a variable is considered a mediator when it can be positioned either as a predictor (independent variable) or an outcome (dependent variable). Based on this guideline, the researcher determined the potential role of EO as a mediator variable. By referring to the previous literature review, EO is not only a significant outcome variable of rewards (Baskaran et al., 2018; Naksung & Piansoongnern, 2020; Urban & Verachia,

2019) but also a significant predictor of organizational performance (Amin et al., 2016; Lee et al., 2001; Rauch et al., 2009; Wang & Yen, 2012). Thus, the linkages provided a potential mechanism to adopt EO as a mediator between rewards and organizational performance.

Zehir et al. (2016) conducted a study to explore the role of EO as a mediator between the linkage of Strategic Human Resource Management (SHRM) and a firm's performance. The study results indicated that EO mediated the relationship between SHRM and a firm's performance. Another similar research conducted by Zhu et al. (2018) reveals that the link between the High-Performance Work System (HPWS) and corporate performance is partially mediated by EO. In line with the findings from the aforementioned studies, Moustaghfir et al. (2020) confirmed the important role of HRM practices in improving the organization's innovation performance through fostering the firm's EO. Since the compensation and reward system is regarded as a key practice included in Human Resource Management (HRM) which encourages corporate entrepreneurship (Kaya, 2006; Kuratko et al., 1990; Morris & Jones, 1993; Zhang et al., 2008), the assumption of the positive impact of rewards on EO can be supported (Hanci-Donmez & Karacay, 2019; Messersmith & Wales, 2011). The aim of this study to analyze EO as a mediator between specific HRM practices (rewards) and OP, can be seen as an effort to contribute to the literature gap found in the aforementioned topic. The recognition of the gap has been explained in the literature about HR practices and performance links contributed by many scholars.

One of the prime focuses of the conducted studies about SHRM is to examine the effect of SHRM practices on a firm's performance (Boxall & Macky, 2007). While since the past two decades, numerous researchers have contributed to the view that Human Resource (HR) practices are positively related to performance (Arthur, 1994; Huselid, 1995), the mechanism of how HR practices antecede the organizational outcomes remains unclear (Hanci-Donmez & Karacay, 2019; Savaneviciene & Stankeviciute, 2010). Most of the previous studies did not discuss any mediators to elucidate the linkage between HR practices and organizational performance (Becker & Gerhart, 1996; Harney & Jordan, 2008; Sobaih et al., 2019). The gap of lacking understanding of the mediating variables and their impact on the HRM-performance link is referred to as the "black box" phenomenon (Boselie et al., 2005; Sobaih et al., 2019). In the view of Hayton (2005), literature which examines the linkage between human resource management and corporate entrepreneurship is recently developed but growing.

Many scholars in SHRM have promoted the overall benefits of adopting the bundle of complementary HRM instead of focusing on specific components of HRM such as reward management (Becker & Gerhart, 1996; Delery & Doty, 1996; Huselid, 1995; MacDuffie, 1995; Wright & Boswell, 2002). Nevertheless, the trend among the SHRM scholars to view HRM as the bundling of different practices has led to the contrary that attention to the impact of individual practice of HRM systems on organizational performance is insufficient yet shallow (Delery, 1998; Dyer & Reeves, 1995; Guest, 1997; Jiang et al., 2012; Laundon, 2018). Hence, this drawback justifies for the current study to contribute in-depth observation of the effects of rewards in the organizational context.

H4a: Innovativeness mediates the relationship between Financial Rewards and OP.

H4b: Risk-Taking mediates the relationship between Financial Rewards and OP.

H4c: Proactiveness mediates the relationship between Financial Rewards and OP.

7 Contributions and implications for future directions

Theoretically, the current study will present significant contributions to the effects of rewards on EO and OP by extending the theoretical model developed before by Vroom (1964) and Penrose (1959). Accordingly, the study will include new findings from the latest literature associated with rewards, EO, and their relationships with OP. Despite the large volume of literature about practitioner-focused rewards practice, in-depth-analysis by scholarly research about rewards practice needs more attention (Deadrick & Gibson, 2007). Most of the previous studies in the HR field treat reward systems as part of human resource management (HRM) practices in analysing HRM-performance links (Becker & Gerhart, 1996; Delery & Doty, 1996; Huselid, 1995).

This paper attempts to present the novelty of addressing the reward system more precisely by examining the relationship between this specific practice of HRM bundle with the organization's performance. The in-depth exploration of rewards effects on performance is crucial since the reward system is regarded as one of the main components that shape employees' behaviour to be aligned with the firm's strategy (Kaya, 2006; Zhang et al., 2008). The novelty of this study is even more obvious, given the research is focused on the rewards implementation of the manufacturing industry transforming into industry 4.0. While most previous studies about the rewards-performance were conducted in manufacturing industries across North America and Europe, the attention to the abovementioned relationship in the industry 4.0 manufacturing industry is still at the minimum level. Another novelty offered by the present study is the examination of the effect of the reward system on the performance of the INDI 4.0 manufacturing industry by measuring the perception of middle managers representing their organizations, as they share information with top managers while also interacting with frontlines employees. They also implement decisions and nurture an environment that encourages adaptation to change (Guo et al., 2017).

Furthermore, the present study introduced the mediating role of EO as a multidimensional construct between each component of the total reward system and OP. This attempt is an extension of similar studies done previously that either treat rewards as a single construct (Baskaran et al., 2018) or treat EO as a unidimensional construct (Adam, 2018). The initiative to propose the framework with multidimensional EO as the mediator between two-dimensional rewards and OP is comparatively novel in the field of HR and EO studies.

8 Managerial implications for practitioners

The topic of this paper is crucial to provide insight into the Indonesian manufacturing firms' managerial issues in their preparation to endeavour technological transformation. Therefore, this research aims to provide empirical results regarding the significant effect of rewards on firm performance directly or through the mediation of EO. Hence, the findings produced by the study will assist the manufacturing industries in Indonesia to identify the direction of their strategic plans to trigger the proper performance of innovation and transformation into industry 4.0, by examining the effect of the reward system in the firms.

The findings revealed by this paper are an important reference for the top management and consultants in the manufacturing industry since the study identified the effects of rewards on triggering the entrepreneurial behaviours of middle managers and executives that eventually bring along the improvement of the firms' performance. A framework model that describes the relationships between rewards, EO dimensions and OP can be derived as the base structure of the field research. Additionally, the data analysis provided by this study will convey a better understanding of motivating the staff in the

manufacturing sector to embrace the disruptive challenges, for the policy and strategic planners across the public institutions, NGOs, state enterprises, and private enterprises.

In precise explanation, this study attempt to formulate the strategy from the management studies approach to be adopted in the disruptive (VUCA) era, to maximize the benefit of the new technology implementation to economic growth and performance of manufacturing firms particularly. The wider implementation of the model introduced by this conceptual paper will assist the manufacturing industry in Indonesia in improving its readiness to embrace the industrial revolution 4.0. Hence, the ultimate goal of successful transformation into new technologies is to improve manufacturing productivity in Indonesia.

9 Limitations and suggestions for further research

However, some study limitations should be put in attention to. The first limitation is that this conceptual paper mainly focused on the perceptions of middle managers or executives in the manufacturing industry. The direct and indirect effects of rewards on organizational performance should not be generalised by the outcome of measurement done on middle-level management solely. Further studies can be proposed to examine the organizational level feedback from other industries, represented by the persons from the different levels in the organization's hierarchy. The second limitation is the limited understanding of the reward-performance mechanism by examining EO as a single mediating variable. Future research can elaborate on other new aspects as additional mediating or moderating variables. The exploration of similar frameworks with the individual unit of analysis is also encouraged deepening the depth of this study.

Nevertheless, the current study is limited by the results from the research in a certain context in Indonesia. The extension of this study to different contexts with different aspects such as culture, norms, demography, etc. will contribute to the broader understanding of the concept in this paper.

10 Conclusion

In conclusion, this conceptual paper has introduced that despite the direct effects of rewards on organizational performance, the construct also possesses an indirect effect on OP through the mediating effects of EO. While the majority of previous studies suggested that rewards have a positive impact on the performance of organizations in developed countries, it may be extended to the assumption that the same phenomenon can be examined as well in the context of South-East Asian countries and emerging economies like Indonesia. The management of manufacturing firms should be more committed to the continuous improvement of the rewards system, as it is one of the main predictors of the firm's performance. The motivation triggered by the implementation of rewards will either be converted directly to performance improvement or through organizational entrepreneurship behaviours. This paper contributes to the SHRM literature in general and the rewards topic in particular by proposing EO as the mediator to explain the "black box" in the relationship between the rewards system and performance. The framework proposed in the development of the hypotheses network in this study was underpinned by Vroom's expectancy theory of motivation and RBV theory, which emphasizes the significance of EO as a catalyst in the rewards-performance process.

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