

LEVERS OF CONTROL, CATUR PURUSA ARTHA AND FINANCIAL PERFORMANCE OF VILLAGE CREDIT INSTITUTIONS: BELIEF SYSTEM VERSUS RELIGIOUS VALUES

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Abstract: *This research aims to provide empirical evidence about the influence of levers of control (LoC) and their interactions in Catur Purusa Artha on the financial performance of Village Credit Institutions. Using a quantitative approach through a survey (filling out a questionnaire) by 17 Village Credit Institution units via a Google form link, responses were obtained from 51 people consisting of pemucuk, petengen and penirik (non-probability sampling) petengen. Data analysis uses OLS regression and moderated regression analysis (MRA). The research results show that levers of control have a positive effect on the financial performance of Village Credit Institutions. The results of the analysis of the interaction between LoC and the catur purusa artha value have no effect on the financial performance of Village Credit Institutions. The research results show that there is friction between the values of the Catur Purusa Artha organization and the belief system on LoC. The possibility of measuring aspects of organizational values that are indicated to be the cause of the interaction test results cannot be proven in this research. Limitations of the sample and respondents also mean that the research results may not match those expected in the research hypothesis. Evaluation of the use of the Catur Purusa Artha value questionnaire instrument needs to be considered for further research. The implications of research findings show that religious values and belief systems have strength in the implementation of LoC which have an impact on the financial performance of Village Credit Institutions. The role of religious values, namely catur purusa artha, has not been tested much on the effectiveness of LoC. The theoretical contribution of the research is the effectiveness of levers of control and support for catur purusa artha values in improving organizational performance and the practical contribution to the implementation of catur purusa artha religious values as a consideration of contingency factors in the effectiveness of levers of control indicated to be able to improve LPD financial performance.*

Keywords: *Financial Performance, Levers of Control Catur Purusa Artha*

INTRODUCTION

An organization is made up of individuals who have to act in a certain way in order to accomplish its objectives. An MCS, or management control system, is required to ensure that the interests of the business and each individual are aligned. MCS is a formal

procedure and system that uses information to maintain or change patterns in organizational activities ([Martyn, Sweeney, and Curtis 2016](#)). Several previous findings strengthen the trend of management accounting research, especially in the field of Management Control Systems (MCS) which is mostly associated with internal and

external resources of the company ([Cahyono 2023](#)).

The levers of control (LoC) that Simons proposed provide a comprehensive MCS framework that illustrates how behavior, supervision, feedback, and fundamental values are represented. The LoC framework provides information and motivates employees to take targeted actions. The role of MCS has an impact on the realization of the effectiveness of organizational control, especially in 4 (four) control groups, namely the belief system provides basic values, goals, and directions for the organization, the boundary system communicates risks that must be avoided. The diagnostic control system monitors organizational results and corrects deviations from performance standards and the interactive control system communicates information between superiors and subordinates ([Simons 2014](#)). The LoC framework has been widely used in research in the field of management control for more than two decades ([Martyn, Sweeney, and Curtis 2016](#)).

Research by [Phan et al. \(2023\)](#) found that the use of belief systems and interactive control systems is positively related to the level of organizational resilience and workplace flexibility which in turn has a significant positive effect on organizational performance. Research by [Billah et al. \(2024\)](#) found that there are various responses at various hierarchical levels to the complexity of MCS changes in the behavior and attitudes of individuals in higher education. Research by [Amato et al. \(2024\)](#) proves that the MCS maturity level plays a very important role for companies in the process of making company decisions, especially in family companies that have carried out the digitization process.

Research by [Sedra et al. \(2024\)](#) analyzed the role and contribution of management control in the performance management of Moroccan public hospitals. The main findings highlight the role of integration and dialogue played by management control, which

promotes the emergence of a common organizational culture. [Kunz and Heitz \(2021\)](#) research was conducted to synthesize several studies on the fragmentation of the attachment of risk culture to the bank's management control system. The results show that both are comprehensive models and consequences for theory, business practice, and regulation in the bank industry.

Research by [Putri et al. \(2024\)](#) was conducted to determine the existence of culture and its deconstruction in the management control system in traditional banking institutions. The results of the study showed that culture and MCS have a big impact on each other. The form of culture-based MCS deconstruction is the form of goodness implemented in Standard Operating Procedures, Assets implemented in Work Plans, budgeting, and spending implemented through performance. Research by [Ferretti et al. \(2024\)](#) analyzed the role of MCS on environmental, social and governance (ESG) issues. The results of the research indicate that the MCS framework control mechanism has a thorough integration of ESG problems.

Village Credit Institutions (LPD) as financial institutions based on traditional villages in Bali carry out financial functions optimally in managing the financial potential of traditional villages/*pakraman* to improve the economy ([Trisnawati 2019](#)). In managing institutions based on traditional villages, LPD administrators and staff are required to carry out operational or institutional activities based on religious values, one of which is through the teachings of *Catur Purusa Artha*, namely the four goals of human life, namely Dharma, Artha, Kama, and Moksa.

The benefit of regularly putting *Catur Purusa Artha*'s teachings into practice is that it makes it simple to understand the meaning of religion and human existence. If Dharma, Artha, and karma have been fulfilled then happiness will be felt, but to achieve moksha we need to release worldly ties such as Artha and Kama but still practice the teachings of Dharma ([Asih, Suarjadi, and Marselinawati 2023](#)). LPD

business activities must be based on goodness or dharma, profit, namely *artha* to fulfill the desires or *kama* of the community which is continued with *moksa*, namely the realization of happiness and prosperity. This is also stated in Regional Regulation Number 3 of 2017 concerning LPD ([Peraturan Daerah 2017](#)).

The phenomenon and the theoretical underpinnings of the research are supported by a number of empirical study supports, which are detailed below. Strengthening LPD internal factors is the focus of several studies on the existence and performance of LPD. [Suryanata \(2019\)](#) proves that LPD becomes better if it synergizes with village officials and the Traditional Village community. LPD management must pay attention to internal factors both in terms of organization and personal LPD management. [Pancadana \(2013\)](#) revealed that the values of religious law or Hindu teachings cause LPD performance to increase when LPD applies religious concepts in carrying out its activities. Research [Trisnawati \(2019\)](#) also found that LPD financial performance is influenced by LPD capital factors and structures. Since culture is seen as the cornerstone of organizational governance, LPD, an organization founded on *adan* and culture, is highly committed to enhancing the welfare of traditional village communities. Cultural characteristics of LPD administration are closely linked to this belief. The success of implementing corporate governance depends on the enforcement of the value system that exists in the organization. The value system cannot be separated from the culture adopted by an organization ([Chairuman 2019](#)).

LPDs have been established in a number of Bali regencies and cities inside a variety of traditional villages. Buleleng Regency as one of the regencies in Bali, like other regencies/cities, also established LPDs in each traditional village. The number of LPDs owned by Buleleng Regency based on data from the Buleleng Regency Economic and Development Section is 169 LPDs. Data in the fourth quarter

of 2022 specifically in Buleleng District, which has 21 LPDs, can be classified into several categories, namely 9 healthy LPD units, 3 fairly healthy units, 3 not healthy units, 2 not healthy units, 3 stalled units and 1 unit did not report LPD health data. The acquisition of LPD assets and earnings in accordance with the LPD health level calculation, based on data from the fourth quarter of 2022, demonstrates the existence of a non-linear relationship between assets and profits possessed and the LPD health level. Regarding LPD management, it has to do with how the LPD management is assessed in relation to general management and risk management statements. The indication of LPD health assessment in the healthy to unhealthy or even stalled categories will thus depend greatly on the internal factors of the organization in carrying out organizational/institutional management and human resources.

Buleleng District is one of the districts in Buleleng Regency which has 21 LPD units with health data conditions and asset and profit acquisition being a very interesting reality to study regarding strengthening LPD internal factors. That condition also shows the performance of LPD during the Covid 19 pandemic and the new normal like today. To enhance LPD services for indigenous village communities impacted by the pandemic, an institutional performance assessment that prioritizes internal factors is required. The reasons behind LPD's achievement include both individual and organizational, particularly given that it is situated in the district capital area (Buleleng District), which ideally has a higher state of health than other districts. This is because access to information and communication that can be built with related parties has proven to be unable to be an effective supporting factor for LPD performance.

Based on data of LPD in Buleleng District, especially on the financial condition based on LPD assets and profits, it can be concluded that the assessment of LPD health is highly dependent on the role and contribution of

people in the LPD institutional structure that can produce good LPD performance in terms of finance and non-finance. There is an indication of a tendency for the assessment of LPD management aspects to be related to the evaluation of LPD management regarding general management and risk management statements related to the management control system (SPM) which must be explored and the problems identified further to obtain answers to the emergence of several LPD problems to date that lead to individual error factors (human error) internally in the organization.

Various instances of LPD administration highlight internal components inside the organization's core management, specifically the *pemucuk* (head) and personnel, particularly in the finance and accounting division. The tendency for LPD mismanagement ultimately stems from the role of its top officials, namely: *pemucuk*, *penyarik* (administration and administration) and *petengen* (treasurer). Cases of LPD stalling occurred in the villages of Bangkang, Banyualit, Beratan Samayaji, Galiran, Tista and Anturan as released by the Ekbangsetda of Buleleng Regency. In fact, fraudulent acts committed by those serving as LPD administrators were the root cause of the mismanagement issues that transpired. These actions dominate the internal problems of LPD. As a result, LPD cannot continue its operations as a traditional village financial institution and reduces public trust while clarifying the condition motivated the conduct of this research.

Previous studies still use the basic/core value framework which is part of the belief system. [Pancadana \(2013\)](#) analyzed and formulated that the concept of Catur Purusa Artha as the basis for the business activities of the Village Credit Institution (LPD) of Kikian Village. The values of Catur Purusa Artha influence the financial performance of LPD in Buleleng Regency [Trisnawati; Suryanata \(2019\)](#) found that the synergy of LPD, traditional village officials and traditional village communities influenced the economic development of the

Kedonganan Traditional Village community. The LPD Manager of Kedonganan Traditional Village uses the Tri Hita Karana teachings as the basis for LPD governance. These studies still focus on core values/beliefs as one of the components of the levers of control, namely using local content measurements that provide results in a limited scope.

Research [Suartana \(2012\)](#) analyzed that LPD financial information factors were proven to be able to determine the condition or level of poverty in Bali. Research [Agustina, Purbawangsa, and Artini \(2017\)](#) proved that LPD credit problems were the main factor in LPD operations in Klungkung Regency, thus impacting the health level of LPD. In contrast to previous research explained earlier, research [Suartana \(2012\)](#) and [Agustina \(2017\)](#) did not analyze the value factors in the organization that play a major role in determining LPD performance. The study mostly looks at LPD presence in terms of the organization's professional operational operations based on financial ratios and laws pertaining to LPD performance evaluations. However, the study has shown that the role of LPD individuals also determines the good or bad performance of LPDs. The research development on MCS was carried out by several studies both in Indonesia and other countries. SPM research through the role of levers of control was conducted on SMEs in the Netherlands by [Pešalj \(2018\)](#). The results of the study indicate that SME managerial practices allow the interaction of four components of levers of control, namely: belief, boundary, diagnostic and interactive, helping organizations manage organizational tensions related to short-term and long-term focus, predictable goal achievement, and seeking new opportunities, internal and external focus, control and creativity of SMEs. Based on the description of the concept and findings of previous studies, the direction, problems and objectives of this study are determined.

This study was conducted to fill the previous research gap on LPD performance

based on internal organizational factors more comprehensively, namely the implementation of SPM including: belief system, boundary system, diagnostic control system and interactive control system on LPD financial performance. According to contingency theory, the support of contingency factors tailored to the specifics of the organization is necessary for the management accounting system, which in this instance is based on the management control system (levers of control), to be effective. In this study, the cultural factor through the catur purusa artha value is appropriate to be used to assess the effectiveness in the form of interaction between the levers of control and the catur purusa artha value.

Previous research analyzed the practice of management control systems or levers of control in hotel industry companies, such as research by [Adiputra et al. \(2019\)](#) and [Adiputra et al. \(2020\)](#). This study's usage of contingency variables is primarily focused on organizational cultural values, which are the same as those found in value-and culture-based village credit businesses. Analysis of LPD performance also does not use many values or concepts of religion or belief, which in this research will be analyzed in interaction with the values of Catur Purusa Artha.

The Catur Purusa Artha values are used as the basis for LPD operations and performance ([Pancadana 2013](#)). [Pancadana \(2013\)](#) have analyzed the value, however, the catur purusa artha value is not a stand-alone factor without the support of the effectiveness of the management control system. This shows the important role of both in improving financial performance.

This analysis and the use of LPD subjects in this study will be a new reference for the management of traditional village financial institutions and is a novelty of research that has not been carried out in previous studies related to levers of control (MCS). The implementation of MCS is highly dependent on individuals who must have religious beliefs to realize

organizational goals. [Trisnawati \(2021\)](#) research found that the implementation of the value of catur purusa artha with dharma as the basis for risk management encourages BUMDes managers to have the same commitment in building risk control awareness. This strategy ultimately suppressed credit risk, which led to a decrease in NPLs and maintained liquidity risk.

Based on the description of the phenomenon and the importance of analyzing LPD internal factors through levers of control on LPD performance through the role of local wisdom aspects in institutions/organizations, this study aims to analyze the role of levers of control and Catur Purusa Artha values on LPD financial performance. The limitation is only in one sub-district to prove the role of religious values as a culture/custom that can be used as a pilot project for assessing LPD performance based on religious values as part of the culture of traditional village communities.

Levers of Control

Based on the concept of the levers of control framework, [Simons \(1987\)](#) defines MCS as formal procedures and systems that use information to maintain or change patterns in organizational activities. Formal procedures and systems that employ information to accomplish or modify different patterns in an organizational activity are viewed as MCS. MCS includes planning systems, reporting systems, and monitoring procedures that are based on the use of information. MCS is related to behavior and organization. The outcomes of MCS will give people satisfaction for their well-executed jobs, which will influence the caliber of the information generated. This has an influence that individuals will make better decisions and achieve organizational goals better so that it will improve company performance.

In several studies on MCS, the levers of control framework proposed by Simons has gained a prominent position in contemporary management control thinking [Kruis, Speklé, and Widener \(2016\)](#). The LoC framework [Simons](#)

(1994) is a business strategy control achieved by balancing the strength of four control levers, namely: beliefs control, boundary control, diagnostic control and interactive control. The strength of the four levers does not work individually, but rather on how the levers work together, complement each other and achieve balance (Simons 1995). Levers are said to produce positive and negative forces that together create dynamic pressures between innovation and strategic renewal that need to be managed to achieve the success of organizational goals.

To manage these positive and negative forces, Simons identified two LoCs defined as positive forces, namely beliefs control system and interactive control system, while two LoCs defined as negative forces are boundary control system and diagnostic control system. Beliefs control system communicates the core values of the company carried out by managers formally to provide basic values, goals, and directions for the organization (Simons 1995). Therefore, beliefs control system is used to deal with conditions of uncertainty or organizational change because it contains values and sanctions so that it becomes a guideline for members of the organization to achieve its goals (Mundy 2010) by adjusting their behavior to the desired results (Speklé 2001).

Boundary control system communicates risks to be avoided, through explanations of acceptable activity domains for organizational participants. It contains rules of business conduct for organizational members that are coercive in nature. In this control, it also applies to managers who function as strategic boundaries to find innovative ideas (Simons 1995). Diagnostic control system is a formal information system used by managers to monitor actual performance and deviations from established performance standards (Simons 1995). When SPM is run diagnostically, managers identify achievements and deviations from planned targets (Mundy 2010). Meanwhile, interactive control system is a formal information

system used by managers to involve themselves regularly and personally in subordinate decision-making activities (Simons 1995). This is necessary when organizations face strategic uncertainty related to changes in competitive dynamics and internal competencies that must be understood if the business is to respond to new strategies and successfully adapt over time (Bisbe, 2007; Tuomela 2005). Interactive indicates two-way communication between managers and subordinates at all levels of the organization to plan and achieve organizational goals (Mundy 2010).

Contingency Theory

The contingency theory perspective first introduced by Otley (1980) is used in many studies on management accounting and organizational control Otley (2016). Furthermore, by concentrating on management accounting methods rather than just management accounting procedures, contingency theory's scope is broadened to include elements of management control systems (MCS) utilized in conjunction with management accounting information. The idea of contingency theory will require further clarification, because it can be said that all research on these topics has a possible approach that universal solutions to problems in organizational control generally do not exist (Otley 2016).

The contingency approach is an approach that is often used in research in the field of management accounting which is based on the premise that there is no accounting system that is universally applicable and applied to all organizations in all conditions (Otley 1980). Therefore, the most appropriate model of an accounting system is highly dependent on the conditions of the organization itself. The contingency technique has evolved as a result of the accounting system's development. The main proposition of contingency theory is that contingency theory assesses that company performance will depend greatly on the fit

between the contextual factors of an organization ([Cadez and Guilding 2008](#)).

The basic essence of the contingency approach also states that organizations must adapt to their contingency factors such as the environment, organizational size and business strategy if the organization is to be run well ([Gerdin and Greve 2008](#)). Contingency studies then have a broad impact on the use of various contextual factors. [Chenhall \(2003\)](#) then conducted a meta-analysis of various studies that had been conducted and found that contextual factors were very influential in designing a management control system. These factors are the environment, technology, organizational structure, organizational size, strategy, and organizational culture. From the perspective of the contingency method, these elements are referred to as organizational contextual variables. These factors can also affect organizational performance. [Duncan \(1989\)](#) stated that organizational effectiveness is a function of the fit between the organizational structure and the environment in which the organization operates. [Otley \(1980\)](#) emphasized that organizations adapt to contingency conditions by managing controllable factors (owned by the company) so that it is expected to produce organizational effectiveness.

Catur Purusa Artha

The values of Catur Purusa Artha, namely the four goals of human life, namely Dharma, Artha, Kama and Moksa which are used as the basis for LPD operations and performance ([Pancadana 2013](#)). Dharma is the internal business process of an organization that is carried out by management of customers, operational tasks, and legal requirements. The company's financial goal, Artha, is attained by striving for operational efficiency and growing business and sales volume. Kama is an effort to increase customer satisfaction through competitive prices, fast service, quality products and partnerships with customers. Moksa is the goal of a business, namely increasing business

value which is realized by trying to increase profits, reputation and sustainable business capabilities ([Wiagustini, N.L.P, Ningsih, N.L.A.P, Artini 2017](#)).

LPD must pay attention to internal factors both in terms of organization and personal LPD management ([Suryanata 2019](#)). The values of Hindu religious teachings cause LPD performance to increase when LPD applies religious concepts in carrying out its activities ([Pancadana and Parwata 2013](#)). The financial performance of LPD in Buleleng Regency is influenced by religious teachings as part of the organizational culture and capital structure of LPD ([Trisnawati 2019](#)). The Catur Purusa Artha culture which is extracted from Balinese local wisdom is an intangible asset that can encourage improving the financial performance of SMEs in Bali ([Wiagustini, N.L.P, Ningsih, N.L.A.P, Artini 2017](#)).

Organizational values may raise a firm's effectiveness, value, and performance by inspiring people to strive toward company objectives. Research on LPD bankruptcy caused by misappropriation of financial capital by LPD management and high bad debts are overcome through anti-corruption education for individuals that affect individual character ([Atmadja 2015](#)). The importance of managing individuals in groups or organizations cannot be separated from the individual's personal self and organizational control. However, these studies examine the concept of culture specifically in practice in LPD and companies or direct influence on performance without connecting with SPM (LoC) in the interaction concept developed in this study so that it can affect LPD performance.

Corporate Performance

Corporate performance is one of the most prominent concepts in organizational research. This is related to the main purpose of organizations is to find the determinants of corporate performance ([Miller, Washburn, and Glick 2013](#)). Some companies have adopted

internal performance evaluation frameworks that incorporate non-financial measures as a consequence of external reporting demands on these measures ([Ittner 2003](#); [Kaplan 1996](#)). The increasing emphasis on the use of financial performance measures has been widely discussed in the accounting literature such as [Subramaniam \(2011\)](#), [Jermias and Gani \(2004\)](#) and [Gani and Jermias \(2012\)](#). Competition has forced companies to implement strategies and management systems to overcome dissatisfaction with traditional short-term perspective financial measurement systems ([Said 2003](#)). However, the main motivation behind the use of financial measures is the idea that only financial performance is more indicative of corporate activities that are conceptually correct and can align corporate efforts with strategic objectives ([Kaplan and Norton 1996](#)).

Some research and use of corporate financial performance proxies still focus heavily on accounting and market-based financial performance. Previous studies using accounting performance proxies Return on Asset (ROA) and Return on Equity (ROE) such as [Callahan \(2017\)](#), ROA such as [Florio and Leoni \(2017\)](#), ROE such as [Pagach and War \(2011\)](#). Some reasons for using accounting-based performance proxies such as ROA are because these measures are under greater control by managers and are more likely to reflect management efforts to maximize profits ([Firth, Fung, and Rui 2007](#)) while considering the financial market conditions of a country that are still in a state of high volatility and the principle of informativeness ([Wu, H., Li, S., Ying, S.X., & Chen 2018](#)). Meanwhile, according to [Callahan and Soileau \(2017\)](#) that ROA and ROE show company indicators in relation to the good governance process and the company's profit achievement. On the other hand, studies that conduct SPM analysis of performance include those conducted by [Gani and Jermias \(2012\)](#) who use accounting-based financial performance proxies, namely ROA and ROE. Research [Bedford \(2015\)](#) analyzes company

performance using a questionnaire instrument through market-based performance proxies (sales growth of new product/service markets, sales growth of existing product/service markets, relative market share for primary products/services). Meanwhile, the use of market-based financial performance that is often used in several studies is Tobins'Q, a measurement that is often referred to as the value of this company explains that all elements of the company's debt and share capital are calculated so that they can provide the best information.

The use of financial performance measures can be applied to LPDs that have modernly prepared their financial reports based on Financial Accounting Standards (SAK), namely Financial Accounting Standards for Entities Without Public Accountability (SAK ETAP). Several components in measuring LPD financial and non-financial performance as was done in previous studies such as [Trisnawati \(2019\)](#) as well as in financial and non-financial companies based on financial and non-financial information to measure LPD performance in this study.

Hypothesis Development

[Simons \(1995\)](#) states that four LoCs are needed in an organization to balance predictable goal achievement and creative innovation: belief systems, boundary systems, feedback systems and measurement systems that can be used in diagnostic or interactive ways. [Simons \(1995\)](#) argues that to implement strategy successfully, top management must understand each of the four key strategic variables: core values, strategic uncertainty, risks to be avoided and critical performance variables. Because of their strong interdependence, all of these factors must be taken into account at the same time in order to avoid an inadequate understanding of the issue. The management traditions and values are reflected in core values, which need to be in line with the intended strategic direction. Risks to be avoided are potential temptations and

pressures that if acted upon could damage the reputation and success of the business. These risks include both strategic and business risks. Every one of the four control levers serves a distinct function and is made to govern the underlying structures that go along with it. For the organization to be able to assess its success, all four levers need to be in line with its plan.

SPM is not only about operations and strategy, but also contains behavioral aspects in it as a control domain for the company so that it determines the company's operations and strategy. Research by [Putri et al. \(2024\)](#) was conducted to determine the existence of culture and its deconstruction in the management control system in traditional banking institutions. The research findings show that there is a significant influence between culture and MCS. The form of culture-based MCS deconstruction is the form of goodness implemented in Standard Operating Procedures, Assets implemented in Work Plans, budgeting, and spending implemented through performance. SPM explains the planning and control mechanisms at each lever in such a way as to provide information on accountability and feedback information to ensure that the company adjusts to organizational changes, internal and external environments, employee behavior and performance measurement ([Namazi 2013](#)). [Sprinkle \(2003\)](#) states that SPM is to mitigate the problem of information asymmetry, reduce uncertainty and the decision-making process.

In several studies on SPM, the levers of control framework proposed by Simons has gained a prominent position in contemporary management control thinking ([Kruis, Speklé, and Widener 2016](#)). The LoC framework [Simons \(1995\)](#) is a business strategy control achieved by balancing the strengths of the four control levers, namely: beliefs system, boundary system, diagnostic control and interactive control. The strength of the four levers does not work individually, but rather on how the levers work together, complement each other and achieve

balance ([Simons 1995](#)). Levers are said to produce positive and negative forces that together create dynamic pressures between innovation and strategic renewal that need to be managed to achieve the success of organizational goals.

Organizational goals are usually measured through organizational performance achievements. This research determines that one of the performance impacts due to the effectiveness of the management control system through levers of control is financial performance which is caused by the synergy of beliefs and boundary systems as well as diagnostic and interactive control systems. Therefore, the management accounting system manifested in the levers of control will also affect the improvement of organizational performance due to the effectiveness of each levers.

Village credit institutions as organizations based on customs and culture, like other organizations, require the design of a management accounting system to improve their performance. The management control system through the control lever also has an important role for it to move individuals through the effectiveness of the belief and boundary system and the diagnostic and interactive control system to realize high performance.

Based on the description, the research hypothesis can be formulated as follows.

H₁: Levers of control have a positive effect on LPD financial performance.

[Chenhall \(2003\)](#) and [Fauzi \(2009\)](#) prove that the implementation of an effective management control system influences individuals to respond differently to the implementation of SPM. The strength of levers of control can cause organizations to make efforts to improve the effectiveness of SPM ([Widener 2007](#)). Therefore, LPD with SPM through levers of control is indicated to have an impact on financial aspects, LPD management, customers and individuals within it. Research by [Sedra et al. \(2024\)](#) analyzed the role and contribution of management control in the

performance management of Moroccan public hospitals. The main findings highlight the role of integration and dialogue played by management control, which promotes the emergence of a common organizational culture. In other words, SPM in LPD will have an impact on LPD financial and non-financial performance. The need for an understanding of religious values in the teachings of Catur Purusa Artha, namely the four goals of human life, namely Dharma, Artha, Kama and Moksa which are used as the basis for LPD operations. LPD business activities must be based on goodness or dharma after that leading to profit, namely artha with the profits obtained will be able to fulfill the desires or kama of the community so that if the desires or kama have been fulfilled then moksa, namely the realization of happiness and prosperity ([Pancadana and Parwata 2013](#)).

Linked to contingency theory, it is indirectly expanded in scope by including aspects of the management control system (MSS). The idea of contingency theory states that universal solutions to problems in organizational control generally do not exist ([Otley 2016](#)). Interaction analysis as a form of analysis to examine its role in LoC so that it has an impact on LPD performance.

Conceptually, it can be shown that the effectiveness of levers of control supported by the high implementation of the values of Dharma, Artha, Kama and Moksa in each individual will further improve their financial performance.

Based on this description, the research hypothesis can be formulated as follows.

H₂: Levers of control that interact with the Catur Purusa Artha value have a positive effect on LPD financial performance.

Research Roadmap

This study is a basic study to analyze the effect of LoC and Catur Purusa Artha interactions on LPD's financial and non-financial performance. Based on the urgency of SPM in organizations, empirical studies are needed, especially research that uses organizations based on customs and culture that use the levers of control approach, which was first conducted in this study. Review of previous studies that focus more on the substance of LPD customs and culture specifically and analysis of financial information are the basis for consideration in developing a more comprehensive framework of thought. The development of the analysis is not only related to religious values as the soul of LPD, it will be supplemented with the concept of rules, performance measures and interactions to determine LPD activities in implementing the management control system. The behavior of individuals as an LPD institution greatly determines its performance through behavioral patterns and habits developed through the practice or implementation of levers of control on LPD's financial and monetary performance. This will also have an impact on the effectiveness of SPM through interaction with religious values so that it can produce good LPD performance in terms of its financial and non-financial aspects. Based on this, the roadmap for this research can be described in Figure 1 as follows.

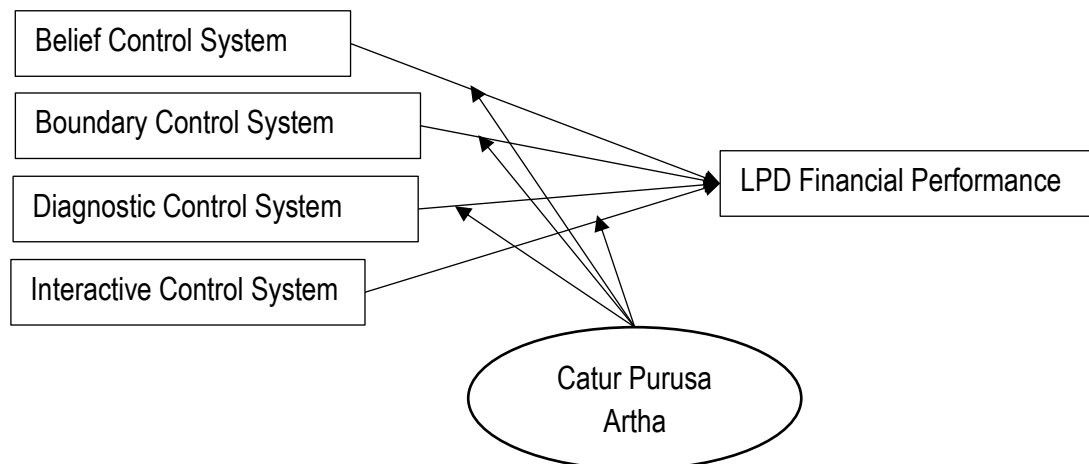


Figure 1. Research Roadmap

METHODS

Population, Sample and Research Respondents

The population of this study was the Village Credit Institution (LPD) located in Buleleng District, Buleleng Regency. The reasons for using LPDs located in one sub-district are: (a) for the specification of organizational characteristics located in the same sub-district area; (b) variations in the health level of LPDs located in Buleleng District spread from healthy, fairly healthy, less healthy, unhealthy and stalled in the assessment of health levels during 2022; (c) Buleleng District is the closest area to the district capital so it is considered to have easy access to information and communication in coordinating organizational activities with related agencies or parties; (d). the same organizational characteristics (homogeneous) will be related to the use of SPM (levers of control) which tend to be the same through formal procedures and systems for information on organizational activities [Simons \(1995\)](#) which are also relatively the same.

The number of LPDs in Buleleng District is 21 units and 3 units are experiencing a jammed condition (no longer operating) and 1 unit did not submit its financial report so that the number of LPDs used as research samples

based on purposive sampling is 17 LPD units. The following are the LPDs that are samples of this research. To obtain the expected research results according to the variables used in this study, 3 research respondents as individual analysis were determined in each LPD, namely the LPD administrators in accordance with Regional Regulation No. 3 of 2017, especially the organizational structure of the LPD, namely 3 LPD officers, consisting of:

- a. *Pemucuk*/Head of LPD;
- b. *Penyarik*/Administrator;
- c. *Petengen*/Treasurer.

Data Collection Method

Research data will be collected by survey by filling out a questionnaire using the Google Form Link facility, email, or given directly based on web information, LPD profiles or contact person assistance. The research questionnaire was designed to consist of closed and open questions. Closed questions are questions to measure research variables with predetermined answers and respondents are expected to be able to choose answers according to the actual conditions in the LPD. Open questions focus on answers to the respondent's identity including the name of the LPD, the respondent's name, gender, age, education, position, length of service and length of service.

Table 1. Samples of Research

No.	Name of the LPD	Health Level
1.	Alapsari	Healthy
2.	Alasangker	Healthy
3.	Banyuning	Healthy
4.	Banyuasri	Healthy
5.	Buleleng	Healthy
6.	Galiran	Not healthy
7.	Kalibubuk	Healthy
8.	Nagasepeha	Fairly Healthy
9.	Padang Keling	Less Healthy
10.	Pemaron	Healthy
11.	Penarukan	Healthy
12.	Penglatan	Healthy
13.	Petandakan	Healthy
14.	Poh Bergong	Healthy
15.	Sari Mekar	Healthy
16.	Tista	Less Healthy
17.	Tukadmungga	Healthy

Source: District Economic and Development Agency. Buleleng (2022).

Research Variable Operationalization

Management Control System (Levers of Control)

Management control system in the framework of levers of control is defined as formal and information-based procedures and routines used by management to maintain or change organizational activity patterns (Simons 1995). Levers of control include: beliefs, boundaries, diagnostics and interactive control systems. Beliefs control system is defined as the company's belief in core values that formally provide basic values, goals, and directions for the organization. Boundary control system is defined as the domain of activities that can be accepted by the company and workers through business behavior by seeking innovative ideas and communicating risks that must be avoided. Diagnostic control system is defined as a formal

information system to monitor actual performance and any deviations from established performance standards. Interactive control system is defined as a formal information system between superiors and subordinates (leaders and workers) at the management level to plan and achieve organizational goals.

LoC in this study was measured using 18 question items adopted from Bedford (2015), consisting of 4 (four) items each to measure the intensity of the use of beliefs system and boundary system. Meanwhile, 5 (five) question items are used to measure the intensity of the use of diagnostic control and interactive control systems. Integration or joint use of the four levers of control indicates the implementation of the company's SPM. Measurement uses a Likert scale of 1-5. The higher the score of all question

items indicates the higher the intensity of the use of levers of control.

Catur Purusa Artha

Catur Purusa Artha is an individual's life goal covering 4 (four) values consisting of 13 questions, namely: Dharma, is a company's internal business process that is realized through operational activities, customer management and government regulations; Artha, is a financial target at LPD which is realized by trying to operate efficiently, increasing LPD business volume and business development; Kama as an effort to increase customer satisfaction, fast service, quality LPD services (products) and development of service technology; Moksa is the goal of a business (business), namely increasing the value of the business which is realized by trying to increase profits, reputation and sustainable business capabilities. Question items were developed from research ([Wiaquistini 2017](#)). Measurement uses a Likert scale of 1-5. The higher the score of all question items indicates the higher the intensity of understanding of catur purusa artha.

LPD Performance

LPD performance is defined as the achievement of goals set by LPD both from financial and non-financial aspects during the last 3 years except for customer and employee satisfaction for 1 year each. LPD performance in this study was measured using 12 (twelve) question items adopted and developed from [Jermias and Gani \(2004\)](#) and [Gani and Jermias \(2012\)](#) which were viewed from the financial aspect. Measurement using a Likert scale of 1-5. The higher the score of all question items indicates the higher the standard of financial performance achievement. Financial performance is seen based on the increase in ROA, BOPO, LDR, Operating Cash Flow and LPD Operational Cost Control. Measurement using a Likert scale of 1-5. The higher the score of all question items indicates the better the financial performance of LPD (Appendix).

Data Analysis Techniques

Descriptive Statistics

To provide an overview of the demographics of the research respondents and a description of the research variables. This study uses an absolute frequency distribution table that shows the range, average and standard deviation figures. This is done to assess the tendency of respondents' answers to the research questionnaire so that research data analysis can be carried out carefully and comprehensively related to testing the research hypothesis.

Questionnaire Data Quality Test

Survey research is highly dependent on questionnaire answers. Therefore, the use of survey research instruments requires testing the quality of data resulting from the evaluation of questions in the questionnaire through reliability and validity tests. Two procedures carried out in this study measure the consistency and accuracy of data collected from the use of instruments, namely (1) internal consistency test with the Cronbach's Alpha statistical test, and (2) data homogeneity test with a correlation test between the scores of each item and the total score. Reliability testing is carried out by calculating the Cronbach's alpha of each instrument in a variable. The instrument used in the variable is said to be reliable if it has a Cronbach's alpha of more than 0.60. In the validity test with data homogeneity test by conducting a correlation test between the scores of each item with the total score (Pearson Correlation) must show a positive and significant correlation at the level of ≤ 0.01 to 0.05.

Empirical Research Model

The empirical research model used to test hypotheses 1 and 2 is regression with an interaction approach. Furthermore, the regression analysis testing stage is carried out on the financial and non-financial performance of LPD. Since the direction of influence has not been determined, the test will be determined

with a significant value (<0.05) indicating that there is an interaction effect between LoC and catur purusa artha on LPD financial performance. Hypothesis testing uses SPSS 23 through the OLS regression analysis stage. The empirical research model is formulated as follows:

$$a. \text{ Financial Performance} = \alpha_0 + \alpha_1 \text{LoC} + u \dots (1)$$

$$b. \text{ Financial Performance} = \beta_0 + \beta_1 \text{LoC} + \beta_2 \text{CPA} + \beta_3 \text{LoC} * \text{CPA} + \gamma \dots (2)$$

Information:

α_0, β_0 = Intercept

α_1, β_{1-3} = Regression Coefficients

v, γ = error

RESULTS AND DISCUSSION

Data analysis was conducted through testing the research model with OLS linear regression analysis and moderation (MRA). This will show the role of LoC on LPD financial performance and the interaction with Catur Purusa Artha on LPD financial performance. In the initial analysis stage, classical assumptions were tested, namely multicollinearity and heteroscedasticity. After the multicollinearity test was carried out, the results showed that the model did not contain elements of a relationship between independent variables with VIF values all below 10. For heteroscedasticity testing, the results showed that with the Glejser Test, it showed that the variance of the residuals for all observations in the regression model did not contain symptoms of heteroscedasticity. This can be seen that the significance value of all independent variables is more than 0.05. So it is concluded that there is no heteroscedasticity problem in the regression model (untabulated). Validity testing through data homogeneity testing by conducting a correlation test between the scores of each item with the total score (Pearson Correlation) must show a positive and significant correlation at the level of 0.01 to 0.05. The reliability test has a Cronbach's alpha of more than 0.70 (Ghozali 2012) (not tabulated).

Through the distribution of questionnaires carried out using the Google form link and

manually, responses were obtained from the respondents of this study. The research data is based on the answers of 51 administrators from 17 LPD units who participated in filling out the questionnaire. The profile of respondents based on position includes 17 LPD heads (pemucuk), 17 LPD administrators (penyarik) and 17 LPD treasurers (petengen).

The results of descriptive statistics of the research data (n = 51) are shown in table 3. The table shows that respondents showed SPM conditions through levers of control at a good level tending to be. Catur Purusa Artha also shows that the implementation of the concept of organizational values has been carried out well by all LPD managers who are respondents. The financial performance variable shows the standard of achievement of each high performance, more participation in the study. The scale measurement for each variable is indexed because the number of each question item for each variable is different and for data normality. The index is measured by adding up all question items multiplied by a score of 5 for the maximum value and a score of 1 for the minimum value.

$$\text{Financial Performance} = \alpha_0 + \alpha_1 \text{LoC} + u \dots (1)$$

$$\text{Non Financial Performance} = \beta_0 + \beta_1 \text{LoC} + \beta_2 \text{CPA} + \beta_3 \text{LoC} * \text{CPA} + \gamma \dots (2)$$

Hypothesis testing 1 and 2 is done by OLS regression analysis and moderation (MRA), namely the regression of the results of the levers of control (SPM) regression and the interaction of SPM with CPA on financial performance. The results of the analysis are as shown in table 4 below.

Hypothesis Testing 1

The test results show that LoC is able to influence LPD financial performance. The role of LoC in the organization through the power of the four levers is able to provide direction for members of the organization in this case are LPD administrators to be able to improve their abilities in managing LPD to improve LPD

financial performance. As levers that function as levers for LPD activities, both the beliefs held by LPD, limitations through LPD rules, LPD performance achievements and the ability to communicate all LPD business activities to all staff, customers and traditional village communities can be used as drivers for good management of LPD.

This proves that each lever has an effective role because it is able to control the behavior of each individual in the organization as a guideline in implementing each LPD program and goal. LPD is able to move each individual

through the reflection of levers on the vision, mission, goals and strategies of the organization so that individuals are able to play a role in improving LPD's financial performance.

This also proves that the power of the four levers does not work individually, but works together, complements each other and achieves balance (Simons 1995). Levers are said to produce positive and negative forces that together create dynamic pressure between innovation and strategic renewal that need to be managed to achieve the success of organizational goals.

Table 2. Respondents of Researches

Position		LPD heads (pemucuk)	LPD administrators (penyarik)	LPD treasurers (petengen)
Gender	Men	60,9%	60,9%	60,9%
	Woman	39,1%	39,1%	39,1%
Length of	> then 10 years	58,14%	58,14%	58,14%
	> 5-10 years	4,71%	4,71%	4,71%
Service	≥ 1 – 5 years	15,15%	15,15%	15,15%
	< 1 years	22%	22%	22%

Table 3. Descriptive Statistics

Variable	Mean	Maximum	Minimum	SD
SPM	0,94	1	0,83	0,09
CPA	0,80	1	0,77	0,08
Financial Performance	0,86	1	0,73	0,18

Table 4. Regression Results

Variable	Expectation Sign		Regression Coefficients		Sig*		Decision
	1	2	1	2	1	2	
LoC α1	+		1.091		0.000	0.000	H1 Accepted
LoC*CPA/β3		+		0.445		0.129	H2 Not Accepted
R Square/Adj			0.570	0.560			

*significant at 0.05

The results of the study are more specifically described referring to the development of the research hypothesis that several studies on SPM, the levers of control framework by Simons has gained a prominent position in contemporary management control thinking ([Kruis, Speklé, and Widener 2016](#)). The LoC framework [Simons \(1994\)](#) as a business strategy control achieved by balancing the strength of the four levers of control, namely: beliefs control, boundary control, diagnostic control and interactive control. The four levers do not work individually, but rather on how the levers work together, complement each other and achieve balance ([Simons 1995](#)). Positive and negative forces that together create dynamic pressure between innovation and strategic renewal that need to be managed to achieve the success of organizational goals.

[Chenhall \(2003\)](#) and [Fauzi \(2009\)](#) prove that the effective running of the management control system influences individuals to respond differently to the implementation of SPM. The strength of the levers of control can cause organizations to make efforts to increase the effectiveness of SPM ([Widener 2007](#)). Therefore, LPD with SPM through levers of control is indicated to have an impact on the financial aspects, LPD management, customers and individuals in it. In the scope of village-based microfinance institutions, the results of this study are in line with research ([Gani and Jermias 2012](#)) in the context of financial institutions and several studies in the scope of private companies that have an impact on financial performance ([Martyn 2016](#)).

Hypothesis Testing 2

The results of the MRA test show that the interaction of LoC and CPA has not been able to influence the financial performance of LPD. The expectation that the role of religious values underlying the scope of work of LPD based on custom/religion has not been proven in this study. This can be caused by the existence of several religious values that can influence the

performance of LPD management which may not or are not fully oriented to the values of *catur purusa artha*. In Bali, several religious values are known that influence the perspective and philosophy of work in the context of custom, including *tri kaya parisudha* and which is widely known by the community with the concept of *Tri Hita Karana*. CPA which is expected to be a contingency factor in the relationship between LoC and financial performance as a management accounting system is not a factor that is able to strengthen the relationship between the system on LoC and LPD financial performance.

The principle of CPA as an organizational value that was assumed at the beginning was not proven even though the concepts of *Dharma*, *Artha*, *Kama* and *Moksa* are so attached to the mindset of the Balinese people, especially in the management of financial institutions. The organizational values are basically when associated with LoC will be seen in the levers, namely the belief system which is likely to be better understood contextually and its implementation organizationally. This could be a common understanding of the concept of organizational values without having to involve local wisdom values. LoC has been proven to be strongly recognized and indirectly influences the work patterns of each organization and relationships with members of the organization.

The results of this study in the context of its relationship with LoC, the role of LoC is not in line with the specific explanation of the *catur purusa artha* value in the studies ([Trisnawati, 2019](#); [Pancadana, 2013](#); [Wiagustini, 2017](#)). The inconsistency of the findings of this study can actually be seen that the understanding of perception between individuals on the value of *catur purusa artha* is likely different when measured by religious values in general or universally. The choice of contingency factors of *catur purusa artha* has also not fully proven its role in the effectiveness of the organizational management control system because of its religious and abstract nature.

Table 5. Results of LoC Linear Regression Testing on LPD Financial Performance

$$KK = z_0 + z_1Be + z_2Bo + z_3Di + z_4Int + \pi$$

	Expectation Sign	Coefficients	Significant
Constant		-6.924	0.015
Belief	+	1.070	0.000**
Boundary	+	-0.098	0.603
Diagnostic	+	-0.302	0.010**
Interactive	+	0.631	0.000**
Adjusted R-square			0,520
F-test Sign (F-statistic)			0,000
N			51

**Significant on level 5%

Additional Test

This additional test was carried out to prove the strong role of leverage on the LoC on the LPD's financial performance by conducting a regression on each leverage on the LPD's financial performance. The test results are shown in table 5 below.

The test results prove the strong role of the belief system in LoC so that it has a positive effect on the financial performance of LPD. This shows that there is a shift in the assumption of the values of religious/customary organizations with the belief system in the model and research results.

CONCLUSION

Based on the purpose of the study to provide empirical evidence that the Management Control System (levers of control) shows the role of LoC in influencing the financial performance of LPD. However, the results of the study have not been able to prove that the role of CPA values in Levers of Control influences the financial performance of LPD. The values of organizations based on religion/custom are likely to experience value shifts with the levers on beliefs or belief systems in LoC.

The theoretical contribution is the concept of levers of control supported by contingency factors, namely the value of catur purusa artha

as a religious value in improving the financial performance of the organization. The practical contribution of the research is the effectiveness of religious values in the design of management control systems (levers of control) requires consideration of appropriate contingency factors according to the needs of the organization to improve LPD performance.

In accordance with empirical evidence of the study and the limitations of the existing study, especially the scope of the research location is only in the Buleleng District area, it is necessary to expand the research area to cover the entire Buleleng Regency or Bali Province. This makes it interesting to conduct further research to analyze the effectiveness of levers of control on the financial performance of LPD. The limited scope of the research area in only one sub-district requires the expansion of the research location which will affect the wider research sample and respondents so that it is hoped that it will be possible to obtain research results that occur in LPDs in the region, between regions and districts in a more comprehensive manner. Furthermore, the use of the Catur Purusa Artha cultural instrument requires better evaluation of the instrument by developing questions as a proxy. The research model has not included control variables to anticipate other factors that may affect the relationship between

LoC, CPA, and LPD performance, to ensure that the results are more robust and accurate.

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APPENDIX

1. Levers of Control

<i>Beliefs System</i> 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree						
No.	Statement	Answer				
1	LPD has clearly conveyed the values or mission, goals and direction of the company.	1	2	3	4	5
2	Management has actively communicated the values or mission of the company	1	2	3	4	5
3	LPD values or missions are used to create commitment for all parties in the company to achieve its vision	1	2	3	4	5
4	LPD values or missions are used to motivate and guide all parties in LPD in seeking new opportunities for its progress	1	2	3	4	5
<i>Boundary System</i> 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree						
5	LPD has a code of ethics to regulate employee behavior	1	2	3	4	5
6	LPD has policies or guidelines on matters related to opportunities to seek opportunities for advancement	1	2	3	4	5
7	LPD actively communicates risks and activities that employees should avoid	1	2	3	4	5
8	LPD imposes sanctions or penalties on employees who are related to risks or activities outside its policies	1	2	3	4	5
<i>Diagnostic Control System</i> 1 = never; 2 = ever; 3 = rarely; 4 = often; 5 = very often						
9	Management identifies factors that affect LPD performance	1	2	3	4	5
10	Management sets targets for LPD performance achievement	1	2	3	4	5
11	Management monitors LPD performance achievement	1	2	3	4	5
12	Management provides information to evaluate LPD performance targets and achievements	1	2	3	4	5
13	Management reviews key indicators of LPD performance achievement	1	2	3	4	5
<i>Interactive Control System</i> 1 = never; 2 = ever; 3 = rarely; 4 = often; 5 = very often						
14	Management prepares work plans based on LPD budget and performance measures	1	2	3	4	5

15	Management prepares work plans for employee activities	1	2	3	4	5
16	Management conducts discussions based on data, assumptions and action plans with all levels of management about LPD budget and performance measures	1	2	3	4	5
17	Management prepares budget and performance measures based on strategic uncertainty factors	1	2	3	4	5
18	Management encourages and facilitates discussions and exchange of information with employees	1	2	3	4	5

2. Catur Purusa Artha

<i>Moksa</i> 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree						
No.	Statement	Answer				
1	The purpose of LPD is to increase the business value realized through business growth	1	2	3	4	5
2	Creating a good LPD reputation	1	2	3	4	5
3	Carrying out LPD social responsibility	1	2	3	4	5
4	Having sustainable business capabilities	1	2	3	4	5
<i>Artha</i> 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree						
5	LPD financial targets realized through efficiency of LPD operational activities	1	2	3	4	5
6	Growth and increase in LPD business volume	1	2	3	4	5
7	Conducting LPD business development	1	2	3	4	5
<i>Kama</i> 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree						
9	Increasing customer satisfaction through LPD products/services	1	2	3	4	5
10	Strengthening relationships through good relations, partnerships,	1	2	3	4	5
11	Continuous efforts to build LPD's image	1	2	3	4	5
<i>Dharma</i> 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree						
14	LPD is able to manage the business based on the input it has	1	2	3	4	5
15	LPD is able to manage the business based on the output it produces	1	2	3	4	5
16	LPD carries out continuous innovation	1	2	3	4	5
17	LPD carries out business based on	1	2	3	4	5

	regulations					
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3. *Financial Performance*

1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree						
1	LPD is able to increase ROI	1	2	3	4	5
2	LPD is able to increase ROA	1	2	3	4	5
3	LPD is able to increase Profit	1	2	3	4	5
4	LPD is able to increase Assets	1	2	3	4	5
5	LPD has good operating cash flow	1	2	3	4	5
6	LPD is able to control LPD operational costs	1	2	3	4	5

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