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Management control systems in research and development organisations: A multiple case study in Indonesia

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Management Control Systems in Research and Development Organisations: A Multiple Case Study in Indonesia

A Thesis submitted in fulfilment of the requirements for the award
of the degree

DOCTOR OF PHILOSOPHY

from

UNIVERSITY OF WOLLONGONG

By

Parulian Silaen, B. Accy., SE., M. Com (Hons)

**School of Accounting and Finance
2006**

Declaration

I, Parulian Silaen, certify that this thesis has not been submitted previously as part of the requirements of another degree and that is the product of my own independent research.

Parulian Silaen,
31 October, 2006

Dedication

*For my dearest,
Micke Nories, Andrew Giorgio, Michelle Flavia,
and Ashley Lavoyenne Silaen*

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Abstract

Research and Development organisations deal with different environments, purposes, goals, and employees' characteristics compared to non-Research and Development organisations. Research and Development (R&D) activity is a learning process that makes the R&D units deal with relatively uncertain conditions in conducting their tasks. The R&D activity is a non-repetitive task with a purpose to contribute new knowledge whether or not it has specific commercial objectives. Such a situation makes the goals relatively difficult to measure quantitatively and monetarily.

This thesis is built on the thrust of those characteristics of R&D organisations and uses a descriptive case study research strategy to conduct an investigation into how management control systems are applied in public sector R&D organisations in Indonesia and why such practices are chosen. This thesis develops a framework that consists of four core elements of management control systems that need to be considered in setting the control function. The framework is used to explain how and why such practice was implemented. This thesis also involves the historical background of Indonesia from its colonial past to the present. The study has no intention to generalise its finding, rather it hopes to make a contribution to the body of knowledge and practice, with its consideration of the four core elements involved in setting management control systems.

The four core control elements are Desired Ends, Actors, Control Implementation, and Control Tools. The Desired Ends consists of two sub-elements namely Yardstick and Direction. The Actors consists of five sub-elements; Behavioural, Motivational, Domination, Power, and Decision Space. The Control Implementation contains two sub-elements; Control Types and Timing, in which the Control Types consists of Formal and Informal types, and Timing of implementation contains three stages as Input, Process and Output.

The practice of management control systems in Indonesia was found to be an archaic and centralised system. Centralisation of control was found to be placed in the central government offices in Jakarta. Such practice may be influenced by several factors including historical, political, and cultural as well as the nature of the R&D activities. In addition, the management control systems applied were found to be both formal and informal during the input, process and output stages. The control tools practiced by the controller were found to be directional, bureaucratic, and mostly emphasised the financial dimension. The use of the scientific dimension was only found to be used during a seminar presentation.

This thesis contributes to the body of knowledge particularly in the area of management control systems by showing how and why such practices of management control system exist in the government sector in Indonesia. The conclusion of this thesis is that there is a need to consider the core control elements simultaneously in designing a management control systems particularly for a research and development organisation.

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Glossary

Anggaran Pembangunan	Development Budget
Anggaran Rutin	Routine Budget
APBN	National Budget
Bakun	The National Accounting Bureau
Bappeda	The Regional Development Planning Agency
Bappenas	The National Development Plan Agency
Batan	The National Atomic Energy Agency
Bendaharawan	Treasurer
BEPEKA	The Supreme Financial Audit
BKU	General Cash Ledge
BPKP	The Financial and Development Supervisory Agency
BPPI	The Agency of Research and Development in Industry
BPP-Teknologi	The Agency of Assessment and Application of
DIK (Daftar Isian Kegiatan)	Routine Budget
DIP (Daftar Isian Proyek)	Approved Development Budget
Direktorat Pembinaan Anggaran I	Directorate for Budget Sustainability I
Direktorat Pembinaan Anggaran II	Directorate for Budget Sustainability II
DJA	The Directorate General of Budget
DPR	Lower House
DRN	The National Research Committee
DUP	List of Proposed Projects
GBHN	The General Direction for National Development
Inspektorat Jenderal (It-Jen)	Internal Auditor
Jabatan Fungsional	Functional Career Path
Jabatan Struktural	Structural Career Path
KPKN	Government Treasury Office
LIPI	The Indonesian Institute of Science
LK (Lembaran Kerja)	Working Paper
Loknas-Ristek	National conference for Research and Technology
LPD	Departmental Institution
LPND	Non-Departmental Institution
MIBRS	Multi Institutions Based Research Scheme
MPR	The Upper House
Pimpro	The Project's Leader
PO (Petunjuk Operasional)	Operational Guidance
PPILM	The R&D Project in Metal and Machinery Industry.
Proyek Penelitian Sumber Daya Hayati	The R&D project for Biological Resources
Punas-Ristek	The National Direction for Research and Technology.
Puslitbang-Biologi	The R&D Centre for Biology
Repelita	The Five Year National Development Plan
Repeta	The Annual National Development Plan
Ristek	The Ministry of State for Research and Technology
RUT	The Integrated Excellent Research Scheme

Satuan Dua	Budget Ceiling
Sesdalopbang	the Secretary of Local Government
SIBRS	The Single Institution Based Research Scheme
TOR	Terms of Reference
UYHD	Advance Received
Wanpro	Project's Treasurer