

# Intellectual Capital Based Management Accounting System For Creative City

Daryanto Hesti Wibowo

**Abstract:** This study will discuss the problem of how the management accounting system can meet the needs of high quality information to its users in managing creative city for the decision making process. A well-organized management of creative city is needed to overcome the problems of the city to become an innovative place in the development of urban socio-economic life. Accounting management system plays an important role in promoting accountability, efficiency and effectiveness of the creative city manager. Intellectual capital accounting makes management becomes more proficient in decision-making through: the formulation of different management accounting concepts from financial accounting perspective, the concept of connectivity and networking within the organization thereby increasing the relevance of management accounting, management accounting that meet the manager needs for managing creative city.

**Keywords:** Creative Cities, Intellectual Capital, Information, Management Accounting System

## 1 INTRODUCTION

Network development and the urban world of competition has prompted cities in the world changed drastically. Fueled by transnational businesses and public institutions, enabled by information and communication technology (ICT), global production networks and supply chains has spread throughout the world like tentacles (Landry, 2008). According to the United Nations (2015), the City of connecting ideas, trade, culture, science, productivity, social development. City becomes the best place that allows people to advance socially and economically. However, many challenges are there to defend the city in order to continue to create jobs and prosperity without burdening the land and resources. Common urban challenges including congestion, lack of funds to provide basic services, lack of adequate housing and declining infrastructure. The challenges need to be addressed in ways that enable them to continue to thrive and grow, increasing the use of resources and reduce pollution and poverty. The future we want is to make the city as an opportunity for all people, with access to basic services, energy, housing, transport. Municipal Government Services is responsible for the production costs as low as possible in accordance with the specifications, criteria and indicators set in the political system. Council did not intervene on how the product is made or conveyed city. Department contracted by the municipality and inform the board through a system of transparent information on the progress and deviations in the production process. (Hall & Landry, 1997). Differences in expectations on the information presented by management accountants often cause the gap between management and accounting. Pierce & O'Dea (2003) disclose the expectations of the managers on the role of the management accountant larger by providing information in accordance with the needs of management. So the perception gap between accountants and managers can be narrowed. Belkoui (2002) states that management accounting is not just about accounting, but also includes the dimensions of organizational behavior, decision and other things that are positioned so as to shift the role of management accounting.

Demsky (1994) adds that the role of managers who have high professional skill requires management accounting information appropriate for decision-making. World trade of goods and services based on the creative industries in the Special Edition of the United Nations Creative Economy Report, has recorded a trade amounting to USD 624 billion in 2011, an increase of more than double compared with 2002. Along with that increase, creativity and culture it has a non-monetary value of significant development in society through dialogue and understanding between members of the public. In Indonesia, the government has launched a blue print of the 2025 Creative Economy Development in June 2008, making the year 2009 as the Year of Creative Industries. In 2014, the government issued Medium Term Action Plan for 2015 to 2019 as the reference practical creative business development in Indonesia. This is a signal the government's seriousness in developing the creative industries. Percentage of GDP contribution of the creative industries in several countries ranged from 2.8% (Singapore) to 7.9% (the UK) and the rate of growth of creative industries in several countries ranged from 5.7% (Australia) and 16% (the UK). The relationship between state and society in terms of shared responsibility implies a social dimension in the scope of civil society and the workings of the market (Midttun, 2005). This means that the public domain is no longer regarded as the exclusive property of the state, thus requiring community participation through business organizations and civil society. Cultural and creative entrepreneurs motivation may be different according to the individual and sector of Cultural Creative Industry (CCI) in which they operate. Tensions between the creators of cultural works and businessmen, is typical of many companies CCI is often reflected in the desire to prioritize cultural value creation with little motivation to produce economic value (oriented creation), while employers will prioritize economic exploitation of cultural values (growth-oriented) (Kooyman, 2010). Therefore the gap between the entrepreneur and the author of the work is a challenge for management accountants to provide information that can ease the tension between the two. Tayles et al (2007) states that management accounting information system reflects the orientation of the company. If the company is more focused on intangible and intellectual capital would require a different emphasis with companies that have a different focus. Guthrie (2001) adds that intellectual capital is influential in determining the value of the company and the performance of the national economy. So that we can develop metrics that can be used to record and report the

- Daryanto Hesti Wibowo
- Lecturer of Institut Ilmu Sosial dan Management STIAM I & Doctoral Students of Accountancy Department, Faculty of Economics and Business, Padjadjaran University, Bandung, Indonesia [wibowodar@gmail.com](mailto:wibowodar@gmail.com)

value of the company. This review will discuss the problem of how the management accounting system can meet the needs of quality information for the city manager of creative decision-making process. Accounting management system plays an important role in promoting accountability, efficiency and effectiveness of the creative city manager.

## Review of Literature

### 1. Management Accounting System (MAS)

MAS are formal systems that provide information from the internal and external environment to managers according to Bouwens & Abernethy (2000). While Horngren et al. (2002) define it as formal mechanisms for gathering, organizing and communicating information about organization's activities. It does not only include reports, performance measurement systems and computerized information systems such as executive information systems or management information systems. It also encompasses the planning, budgeting and forecasting process required to prepare and review management accounting information. MAS provides management accounting information. Davenport (1993) noted that it is difficult to arrive at a precise definition of what constitutes management information, or information for that matter. Traditionally, Chenhall (2003) stated that management accounting systems provided only internal, historical, and financial information. Over time, they evolved to include a broader scope of information, including external, future-oriented, qualitative and non-financial information. Therefore, management accounting information includes internal / external, financial/non-financial, quantitative/qualitative, and historical / future-oriented information that passed the perception and interpretation filter of management accounting systems. Differences in expectations on the information presented by management accountants often cause the gap between management and accounting. Pierce & O'Dea (2003) disclose the expectations of the managers on the role of the management accountant larger by providing information in accordance with the needs of management. So the perception gap between accountants and managers can be narrowed. Belkaoui (2002) states that management accounting is not just about accounting, but also includes the dimensions of organizational behavior, decision and other things that are positioned so as to shift the role of management accounting. Demsky (1994) adds that the role of managers who have high professional skill requires management accounting information appropriate for decision-making. The aspects mentioned above should be considered in the preparation of management accounting information system because it will influence the decision to be taken by the report. Well & Greilling (2011) states that the accounting information can influence managerial decision-making, either directly or indirectly affect the behavior of the manager. That influence will affect the value of the company. Ahrens & Chapman (2004) noted that the management accounting system can have a very active role and influence in decision-making processes of intervention in small and large. The extent to which reliance can be placed on accounting information by managers resurfaced as an issue in the debate over the relevance of management accounting with digitization in the organization becomes more significant (Boiney 2000; Chandra 2001; Sutton 2000). With companies becoming increasingly concerned over the process and processing of

digital information relating to the production and delivery of products and services digital and physical, the challenge will lie in how to keep sufficient confidence in the monitoring, measurement, and assessment activities of the organization. (Bhimani, 2003).

### 2. Intellectual Capital

The concept of intellectual capital has been recently developed to address the gap between the observed value of a value in the market and its corresponding book value, postulating that the gap represents the financially invisible value of the firm (Edvinsson 1997; Stewart 1997; Bontis 1998; Lev and Zarowin 1999). Or, stated differently, that the market is able to observe the 'intelligence' of a firm that accounting representations are unable to represent and disclose. Category of IC include: financial capital, human capital, process capital, capital markets, and renewal and development capital. Based on this important structure, a variety of diverse capital focus of indicators will be assembled by Bontis (1998):

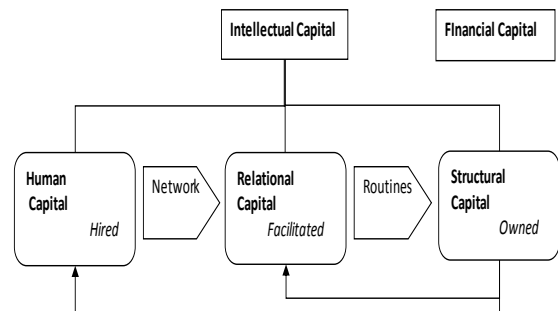


Fig. 1 Categories of intellectual capital and their dynamic relationships, Bontis (1998)

#### Human Capital

Human capital provide intellectual capital base and contains the accumulated knowledge, experience, and competence of employees. It did not differ between the knowledge possessed by employees or by management, as they are all 'human capital' can be accessed for use by the company.

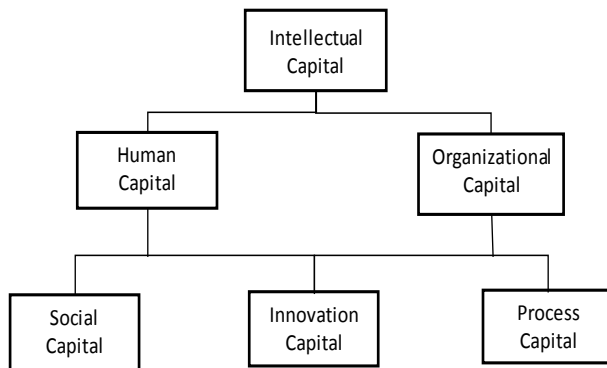
#### Relational Capital

Relational capital includes relational networks between people and groups of people inside and outside the company; Clearly, the organizational boundaries are less important than relationships or connectivity between communities of people. Where human capital to discuss the human individual, relational capital discuss the meso-level.

#### Structural Capital

Structural capital is the only element that the firm actually owns as proprietary know- ledge, and contains the various systems of the organization, e.g. its ICT systems and its managerial accounting system. With increasing knowledge intensity of contemporary economics and the need for innovation in order to maintain a competitive advantage, it has become imperative for countries to enter the realm of creativity with the potential magnitude of it. It becomes easier with rapid advances in information and communication technology (ICT), which progressively connects countries and regions around the world. Thus created opportunities for developing countries

to access global markets with the products of their creativity and cultural diversity in a way not previously possible and do so directly, without intermediaries (UNCTAD, 2008). A city's intellectual capital is a combination of its human and organisational capitals. In the knowledge economy, human capital represents one of the most important sources of value. It provides knowledge, creativity and the ability to innovate. Organisational capital refers to all non-human stocks of knowledge embedded in hardware, software, databases and the concepts and values, organisational structures and guiding principles of organisations or companies that support people's everyday work (Bonfour & Edvinsson, 2005).



**Fig. 2** Different types of capital, Edvinsson (2005)

The IC Navigator-model developed by Professor Leif Edvinsson of Intellectual Capital at Lund University. The lower tier of the model shows three different types of capital each of which supports the development of human and organisational capital including: Social capital comprising both formal and informal social networks including the interaction among citizens and social connectivity. Process capital involving both human and organisational capital. It is process capital that makes the most of the investment made in social capital. Innovation capital refers to how the city renews and adapts its human and organisational capital to the demands of the rapidly changing global economic environment. The nature of the interaction between these three capitals will determine the strength and extent of human and organisational capital present in any organisation or city, which in turn will determine the overall level of intellectual capital. Intellectual capital has a significant impact on the productivity and competitiveness of cities and regions, and nations as a whole. Cities explicitly recognise this, and have developed policies that are designed to improve their competitive position, such as Valencia's which aims to "foster the creation of companies in the sectors closest to the knowledge economy and to provide opportunities to all in order to access information and knowledge technologies." Berlin's aim is to position the city in growth markets of the future. To do this city managers have identified a critical mass of core competencies in the sectors of information technology, communication technology and media, as well as medical systems, traffic engineering and optical systems. Berlin also has an outstanding. (PricewaterhouseCoopers, 200) The role of the management accountant in the future can be based on adjustment of the potential of information and profile information to trigger more creative managerial response (Boiney 2000; Sutton 2000). Accounting management system

can, in some cases, determine the production of new information and provider of information synthesized a new report to encourage non-standard managerial reaction. In such a context, the comparative monitoring issues will arise.

## Discussion

Today, more than half the world's population live in cities. The concept of 'Creative Cities' UNESCO is based on the belief that culture can play an important role in urban renewal. Policy makers increasingly recognize the role of creativity when planning economic policy. Not only creative industry improve quality of life by contributing to the city's social structure and cultural diversity, creative industries also strengthen the sense of community and helps define a shared identity. Creativity has become a key concept in the working agenda of city managers, development agencies and planners who are looking for new forms of urban economic development (Yigitcanlar, 2008). Creative Urban Region (CUR) is defined as a creative urban area provides abundant opportunities for the production of knowledge. With the potential, the creative industries can be expected to be the driver of the local economy that contribute to improving the economy of the area. The relationship between state and society in terms of shared responsibility implies a social dimension in the scope of civil society and the workings of the market (Midttun, 2005). This means that the public domain is no longer regarded as the exclusive property of the state, thus requiring community participation through business organizations and civil society. Motivation of cultural and creative entrepreneurs may be different according to the individual and sector Cultural Creative Industry (CCI) in which they operate. Tensions between the creators of cultural works and businessmen, is typical of many companies CCI is often reflected in the desire to prioritize cultural value creation with little motivation to produce economic value (oriented creation), while employers will prioritize economic exploitation of cultural values (growth-oriented) (Kooyman, 2010). The creative and cultural sector offers great potential and unexpected for the partnership as bridge funding. Monreal and Hassan (2013) asserts that it provides the prospect of attractive investment for the private sector, but it requires sound environmental and social approach that respects and benefits local communities. To realize the potential that exists within the organization required the application of accounting. According Hoque and Moll (2001) accounting plays an important role to achieve accountability, efficiency and effectiveness in the public sector. The concept of 'entrepreneurial culture' has gained recognition over the past decade (since clamps 2006). Cultural and creative entrepreneurs motivation may be different according to the individual and sector Cultural Creative Industry (CCI) in which they operate. Tensions between the creators of cultural works and businessmen, is typical of many companies CCI is often reflected in the desire to prioritize cultural value creation with little motivation to produce economic value (oriented creation), while employers will prioritize economic exploitation of cultural values (growth-oriented) (Kooyman, 2010). Wibowo (2014) considered it to be a challenge to harmonize between the two sectors for profit orientation. Therefore, the gap between the entrepreneur and the author of the work is a challenge for management accountants to provide information that can ease the tension between the two. Tayles et al (2007) states that management accounting information system reflects the orientation of the company. If the company is more



focused on intangible and intellectual capital would require a different emphasis with companies that have a different focus. Guthrie (2001) adds that intellectual capital is influential in determining the value of the company and the performance of the national economy. So that we can develop metrics that can be used to record and report the value of the company. Intellectual Capital (IC) play an important role in the creative industries, so the management in this industry requires a supply of information from the Management accountants in management. According Tayles (2007), the manager realizes that the level and form of IC in the company affecting application of management accounting. Guthrie (2001) believes that the IC in this new century will be essential in determining the value of the company and even the national economy. Based on empirical evidence revealed Sousa & Alves (2012) the value creation process is strongly associated with the level of IC. The study also examined the effect of mediation Management Accounting System through a direct positive effect on the IC. 'Cities' General Intellectual Capital Model' (CGICM) is a transversal approach that covers all economic activities of the city or all of the micro-cluster assembled economy where economic activity. CGICM essentially based on a model for countries that are developed by Edvinsson and Malone (1997) and Bontis (2002). The intellectual capital model holds several relevant promises for making management accounting more intelligible. These are:

- The formulation of a basis for developing management accounting tools and concepts other than as derivatives from financial accounting or from a financial capital perspective
- The concept of connectivity and networks that ties in with the unit (meso-level) of analysis that is of increasing relevance for management accounting .
- The possibility to apply management accounting to the differing demands of service and people-oriented firms

The development of management accounting tools and concepts, which are crossovers, if not shared tools, with other managerial disciplines, necessitates a relaxation of the financial capital orientation, notably of the following aspects: that capital is scarce, that it operates under decreasing returns to scale, and that resource utilization and consumption are key criteria for allocation. (Roberts, 2003) The different demands that service and 'people businesses' place on MAS have put an emphasis on steering the intangibles of an organization. Typically, these businesses have low capital intensity with their productive assets mostly located in the human resource and in their market reputation or branding. These are 'assets' that are not represented in (management) accounting systems, requiring these types of firms to experiment with alternative organization formats and administrative arrangements. Finally, the attempts are to define the organizational formats that work best, and subsequently use their properties and characteristics to develop administrative and coordination arrangements, making do with whatever management accounting can offer to support them. This implies two things for the management accounting field: First, that challenges as well as management accounting innovations are most likely to emerge in these types of businesses, turning them into prime areas for research; and second, that attention to organizational format is warranted, before discussing management accounting change of any sort.

## Conclusion

Management accounting information systems play an important role in promoting accountability, efficiency and effectiveness in structuring creative city. Management accounting systems are required to meet the needs of decision-making for the development of a creative city with Intellectual Capital: human capital, structural capital and relational capital. Structuring the creative city needs information from management accounting systems in accordance with the characteristics of the creative sector that is innovative. Intellectual capital accounting makes management becomes more efficient in decision-making through: the formulation of different management accounting concepts from financial accounting perspective, the concept of connectivity and networking within the organization thereby increasing the relevance of management accounting, the need of management accounting manager to govern the creative city.

## REFERENCES

- [1] Ahrens, T. and Chapman, C. (2004). 'Accounting for Flexibility and Efficiency: A Field Study of Management Control Systems in a Restaurant Chain', *Contemporary Accounting Research*, 21(2): 271–302.
- [2] Belkaoui, Ahmed. 2002. *Behavioral Management Accounting*. Quorum Books.
- [3] Bhimani, Alnoor. 2003. *Management Accounting in Digital Economy*. Oxford University Press.
- [4] Boiney, L. G. 2000. New Roles for Information Technology: Managing Internal Knowledge and External Relationships. *Review of Accounting Information Systems*, 4/3: 1–10.
- [5] Bouwens, J and Abernethy, M.A. 2000. The Consequences of Customization on Management Accounting System Design in Accounting, Organizations and Society 25 (3): pp. 221-241
- [6] Chenhall, R.H. 2003. Management Control Systems Design within its Organizational Context: Finding from Contingency-based Research and Directions for the Future, in: *Accounting, Organizations & Society* 28 (2/3) pp. 127-168.
- [7] Demsky, Joel. 1994. *Managerial Uses of Accounting Information*. Yale University.
- [8] Departemen Perdagangan Republik Indonesia. 2007. *Studi Industri Kreatif Indonesia*, Depdag.
- [9] Departemen Perdagangan Republik Indonesia. 2007. *Program Kerja Pengembangan Industri Kreatif Nasional 2009 - 2025*, Depdag.
- [10] Edvinsson, L., Malone, M. S. 1997. *Intellectual Capital: Realizing Your Company's True Value by Finding its Hidden Brainpower*. New York: Harper Business.
- [11] Guthrie, James. 2001. The Management, Measurement And The Reporting Of Intellectual Capital. *Journal of Intellectual Capital*, Vol. 2 Iss: 1, pp.27 - 41

- [12] Hall, P and Landry, C. 1997. Innovative and Sustainable Cities. Dublin: European Foundation for Improvement of Living and Working Condition.
- [13] Hoque and Moll. 2001. Public Sector Reform Implications for Accounting, Accountability And Performance Of State Owned Entities – Australian Perspectives. The International Journal of Public Sector Management Vol.14 No. 4. 2001
- [14] Horngren, C.T et al. 2002. Introduction to Management Accounting (12<sup>th</sup> ed.). Upper Sadle River, NJ. Prentice Hall.
- [15] Klamer, A. 2006. Cultural Entrepreneurship, Rotterdam. Erasmus University. Academia Vitae.
- [16] Kooyman, R. (Ed.). 2010. The Entrepreneurial Dimension of The Cultural and Creative Industries. Utrecht School of Arts (HKU).
- [17] Landry, Charles. 2008. The Creative City: A Toolkit for Urban Innovators. 2<sup>nd</sup> edition. Earthscan.
- [18] Midttun, A. 2005. Realigning Business, Government and Civil Society: Emerging Embedded Relational Governance Beyond The (Neo) Liberal and Welfare State Models. Corporate Governance, Vol. 5 No. 3, pp. 159-74.
- [19] Pierce and O'Dea. 2003. Management Accounting Information And The Needs Of Managers: Perceptions Of Managers And Accountants Compared. The British Accounting Review. Volume 35, Issue 3, September 2003, Pages 257–290
- [20] Sousa and Alves. 2012. About the relations between Management Accounting Systems, Intellectual Capital and Performance.
- [21] UNCTAD. 2008. Creative Economy Report. The Challenge of Assessing Creative Economy: towards Informed Policy Making.
- [22] Wall and Greilling. 2011. Accounting Information For Managerial Decision-Making In Shareholder Management Versus Stakeholder Management. Springer Verlag.
- [23] Yigitcanlar, Tan et al. 2008. Creative Urban Region: Harnessing Urban Technologies to Support Knowledge City Initiatives. Information Science Reference.