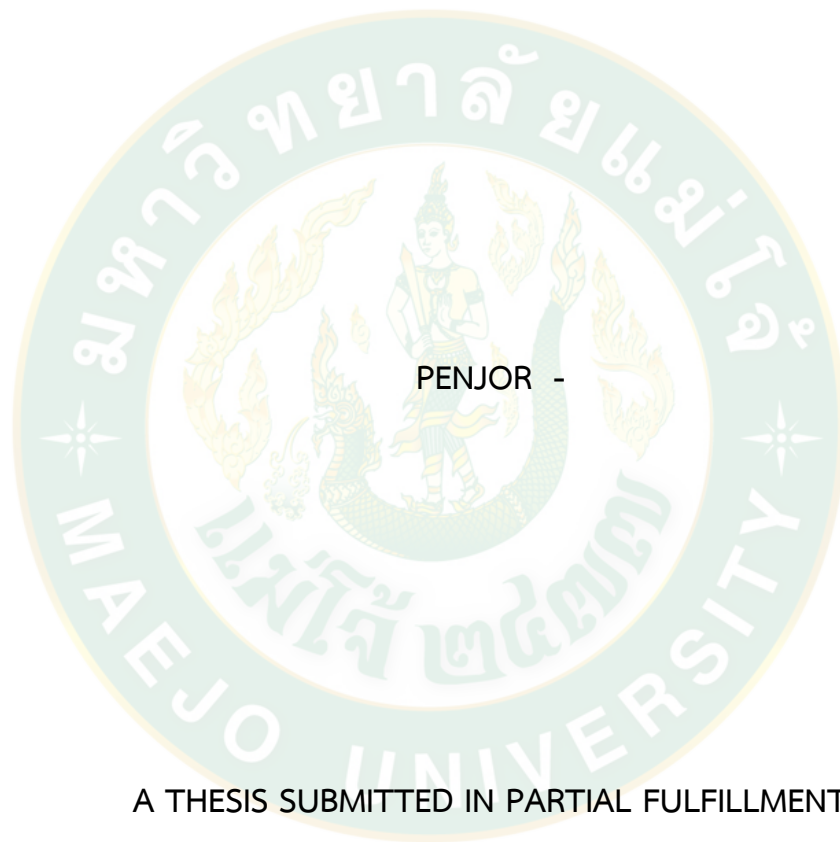


ENHANCING THE CORE COMPETENCY OF THE AGRICULTURE MACHINERY
CENTRE,
DEPARTMENT OF AGRICULTURE, MINISTRY OF AGRICULTURE AND
FORESTS,
ROYAL GOVERNMENT OF BHUTAN



MASTER OF BUSINESS ADMINISTRATION IN BUSINESS ADMINISTRATION
MAEJO UNIVERSITY
2019

ENHANCING THE CORE COMPETENCY OF THE AGRICULTURE MACHINERY
CENTRE,
DEPARTMENT OF AGRICULTURE, MINISTRY OF AGRICULTURE AND
FORESTS,
ROYAL GOVERNMENT OF BHUTAN



A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION
IN BUSINESS ADMINISTRATION
ACADEMIC ADMINISTRATION AND DEVELOPMENT MAEJO UNIVERSITY
2019

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ENHANCING THE CORE COMPETENCY OF THE AGRICULTURE
MACHINERY CENTRE,
DEPARTMENT OF AGRICULTURE, MINISTRY OF AGRICULTURE AND
FORESTS,
ROYAL GOVERNMENT OF BHUTAN

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THIS THESIS HAS BEEN APPROVED IN PARTIAL FULFLLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION
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ชื่อเรื่อง	การเสริมสร้างสมรรถนะหลักของศูนย์เครื่องจักรกลการเกษตร กรมวิชาการเกษตร กระทรวงเกษตรและปศุสัตว์ ไร่รัฐบาลภูฏาน
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บทคัดย่อ

ศูนย์เครื่องจักรกลการเกษตร หรือ The Agriculture Machinery Centre (AMC) เป็นหน่วยงานกลางที่ดูแลในเรื่องของเทคโนโลยีเครื่องจักรกลการเกษตร และมีบทบาทสำคัญในการบรรลุเป้าหมายการพึ่งพาตนเองด้านอาหารของชาติ อย่างไรก็ตามการศึกษาที่ผ่านมาไม่นานได้มีการให้ความสนใจเพิ่มเติมสำหรับการเข้าไปมีส่วนร่วมเกี่ยวข้องเพื่อให้บรรลุความต้องการใช้เครื่องจักรกลการเกษตรในประเทศ ทั้งนี้เชื่อว่าสมรรถนะหลักช่วยให้ประสบความสำเร็จในทั้งระดับองค์กรและบุคคล

ดังนั้นการศึกษาเรื่องนี้มีวัตถุประสงค์เพื่อเพิ่มสมรรถนะหลักของศูนย์เครื่องจักรกลการเกษตรของประเทศภูฏาน โดยผ่านการประเมินองค์ประกอบและคุณลักษณะที่เกี่ยวข้องของสมรรถนะหลักขององค์กรและบุคคล โดยการศึกษานี้ได้ตั้งสมมติฐานคือคุณลักษณะขององค์กรและบุคคลที่มีอิทธิพลต่อสมรรถนะหลักขององค์กรและบุคคลในขณะที่ยังการร่วมกันของทั้งสองสมรรถนะหลักที่มีผลต่อผลการดำเนินงาน

การสัมภาษณ์เชิงโครงสร้างได้ถูกนำมาใช้ในการวิจัยนี้โดยมีกลุ่มผู้บริหารและการใช้แบบสอบถามในรูปแบบ Likert Scale เพื่อรวบรวมข้อมูลเบื้องต้นที่เกี่ยวข้องกับบุคลากรในองค์กร ข้อมูลจากการสัมภาษณ์ได้ถูกนำมาวิเคราะห์โดยการจัดกลุ่มในรูปแบบที่คล้ายกัน ส่วนการใช้สถิติเชิงพรรณนา และเชิงอนุมาน วิเคราะห์โดย T-test, Anova และ Simple Linear Regression เพื่อแสดงให้เห็นถึงสถานะของระดับความสำคัญของตัวแปร และเพื่อทดสอบสมมติฐาน

ผลการวิจัยที่ได้จากการสัมภาษณ์ผู้บริหารชี้ให้เห็นว่า สมรรถนะ ความสามารถ และทรัพยากรในองค์กร ส่งผลต่อการเพิ่มขีดสมรรถนะของระดับองค์กร ในขณะที่ภาวะผู้นำและแรงจูงใจหรือคุณลักษณะเป็นองค์ประกอบที่สำคัญของระดับบุคคล ดังนั้น AMC จึงมีประสิทธิภาพการทำงานทั้งในระดับองค์กรและระดับบุคคล อีกทั้งจากการวิเคราะห์ทางสถิติ

พบว่าคะแนนเฉลี่ยขององค์ประกอบสมรรถนะหลักขององค์กรและระดับบุคคล และผลการดำเนินงานอยู่ในระดับสูง นอกจากนี้ยังพบว่าสมรรถนะหลักขององค์กรและบุคคลส่งผลกระทบต่อผลการดำเนินงานของระดับองค์กรและระดับบุคคลอย่างมีนัยสำคัญทางสถิติ ในขณะที่สมรรถนะหลักมีความสำคัญในเชิงบวกต่อผลการดำเนินงาน

คำสำคัญ : สมรรถนะหลัก, การจัดการองค์กร, รายบุคคล, ประสิทธิภาพ



Title	ENHANCING THE CORE COMPETENCY OF THE AGRICULTURE MACHINERY CENTRE, DEPARTMENT OF AGRICULTURE, MINISTRY OF AGRICULTURE AND FORESTS, ROYAL GOVERNMENT OF BHUTAN
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ABSTRACT

The Agriculture Machinery Centre (AMC) acts as a central agency for sustainable farm mechanization technology and plays a critical role in achieving the national food self-sufficiency goal. However, a recent study recalls further attention for interventions to achieve farm mechanization needs in Bhutan. The core competency is believed to facilitate success at organizational and individual levels.

Therefore, this study was conducted to enhance the core competency of the AMC of Bhutan through assessment of the relevant components and attributes of both the organizational and individual core competency. The study hypothesized organizational characteristics to be influencing organizational core competency and individual characteristics to influence individual core competency. Moreover, a combination of both (organizational and individual core competency) as core competency was assumed to effect the performance.

A structured interview was administered among the management team followed by a Likert survey questionnaire to gather primary information which involved all regular staff at the centre. The interview data were analysed by grouping similar pattern whereas descriptive and inferential statistics such as T-test, Anova and Simple

Linear Regression were performed to depict the status of the importance level of variables and to examine hypotheses.

Findings of the management interview revealed competency, capability and resources as the most highly associated components of the organizational core competency while leadership and motives/traits were conceived as components of the individual core competency. AMC also bears the performance in both organizational and individual levels. In addition, the statistical analysis showed high mean scores on components of the organizational and individual levels of core competency and performance. It was also found that the organizational and individual core competencies significantly effects the organizational and individual performance while the core competency was entered positively significant to the performance.

Keywords : Core Competency, Organizational, Individual, Performance



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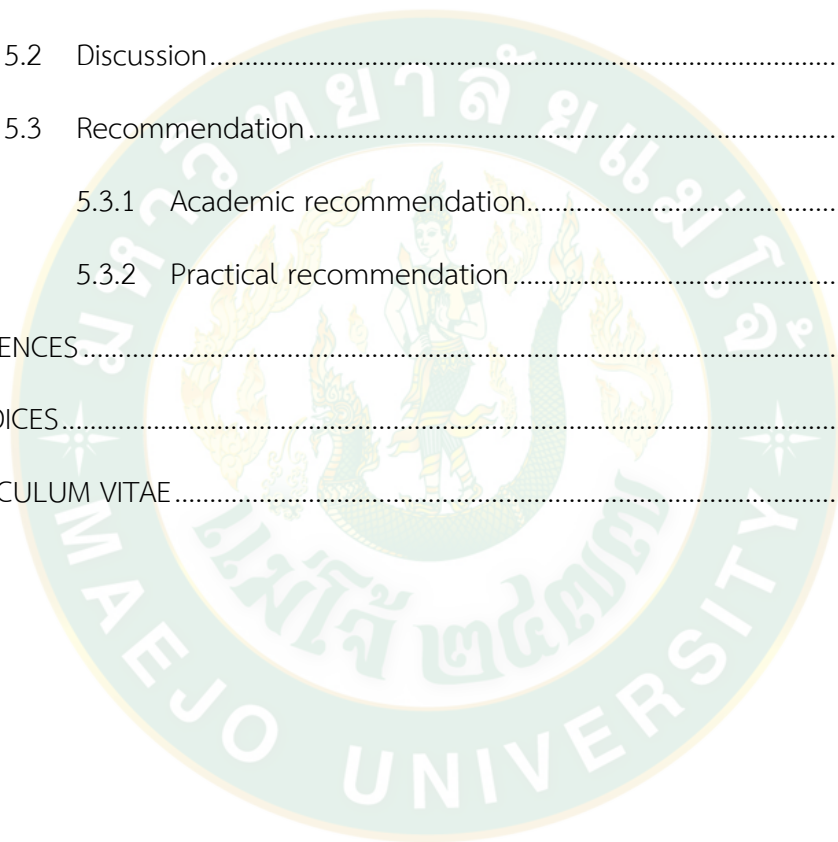
Thank you and Tashi Delek

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Chapter One

Problem Statement

1. Introduction

1.1 Bhutan and Agriculture

The tiny Kingdom of Bhutan is known to the world for its development philosophy of Gross National Happiness (GNH) (Burns, 2011). It has six agro-ecological areas namely subtropical, humid subtropical, dry subtropical, warm temperate, cool temperate and alpine region (MoAF, 2016). These ecological zones are further categorized in three climatic regions such as sub-tropical in the southern foothills, temperate in the middle valleys and inner hills and alpine in the northern mountains.

Situated between two giant nations of the world, China in the north and India in the remaining parts, Bhutan is a small landlocked country with less than a million people mostly dependent on agricultural farming for their livelihood. The income source for 58% of its population is agricultural farming that contributed 16.52% to national gross domestic product (GDP) 2016 (NSB, 2017). Depending on the climatic suitability, cereal crops such as paddy, maize, wheat, buckwheat, millet and quinoa are popular among others and vegetable crops like cabbage, cauliflower, beans, chili, leafy vegetables and potato are also grown. The popular fruit crops include apple, peach, mandarin, pear, mango, avocado, pineapple and passion fruit (MoAF, 2017).

The total area of Bhutan is estimated at 38,394 sq. KMs and only 2.62% of the total area is considered to be feasible for agricultural farming (FRMD, 2017). The country has over 78,851 acres of wetland and 168,657 acres of dry land, out of which, 40,672 acres wetland (52%) and 58,776 acres dry land (35%) has a high potential of mechanization (FMCL, 2016). However, only around 7% of the arable land is under semi mechanization in Bhutan (FMCL, 2016). Further, crisis of irrigation water (DoA, 2012) urbanization, rural-urban migration (MoAF, 2014), human-wildlife conflict (Sangay

& Vernes, 2008), farm labour shortages and inadequate quality farm machines attributed to the drastic increase in fallow land undermining the national food self-sufficiency goal (AMC, 2016).

1.2 Agriculture and Farm Mechanization

Considering the increased farm labour shortage and drudgery in the Bhutanese farm, the Royal Government of Bhutan (RGoB) introduced modern agricultural technology in 1964 with support from the Government of Japan through late Dasho Keiji Nishioka, a Japanese Colombo expert (ICS, 2014). This intervention was further conceived with establishment of the Agriculture Machinery Centre (AMC) in the year 1983 to promote and realize sustainable labour saving and farming technologies in Bhutan (AMC, 2016).

AMC is a central agency under the Department of Agriculture, Ministry of Agriculture and Forests (MoAF), RGoB and mandated to cater to the farm mechanization needs in the country (Fig.1).

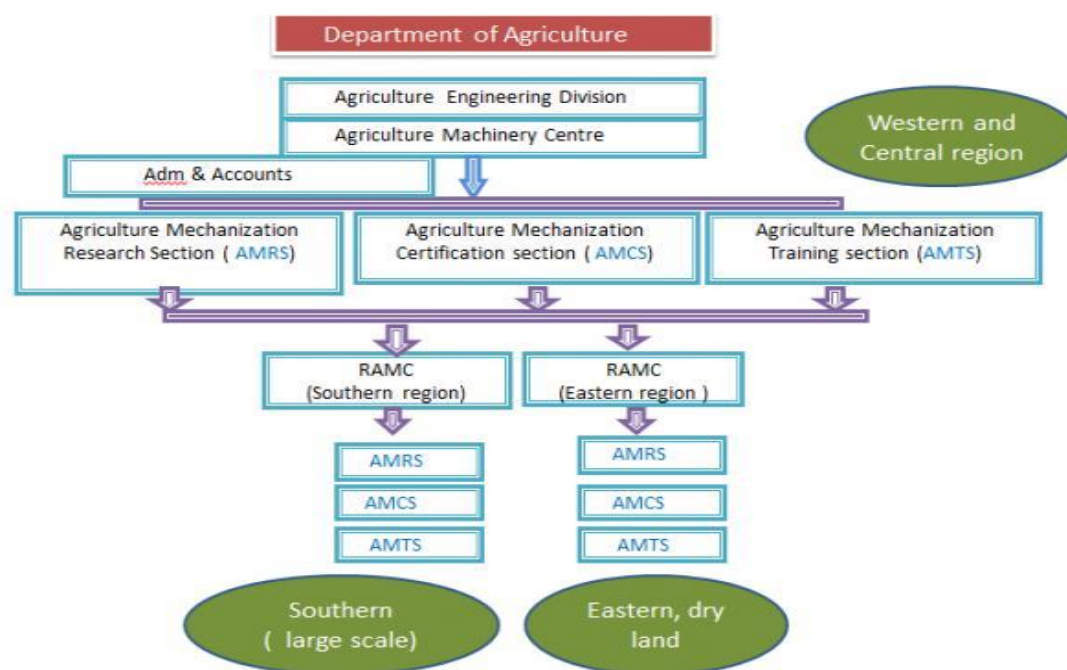


Figure 1: Organogram of AMC showing various sections and activities

The core functions of the AMC are to develop and implement farm mechanization policy and guidelines, generate farm mechanization technology through research, generate and regulate farm mechanization standards and enhance the capacity of relevant stakeholders for farm machinery operation and maintenance (AMC, 2016). This vision places the Bhutanese farmers at the core of all agriculture development activities through the use of appropriate farm machinery, equipment and tools. Over the years, AMC has partnered with the Bhutanese farmers to choose, create and innovate agricultural technologies and farming practices that are appropriate to Bhutanese farm terrain and ecological conditions (AMC, 2012).

Despite the blessings of Their Majesties, the continued effort of the RGoB and high priority accorded by MoAF, farm mechanization interventions in Bhutan is still in the development process covering only field preparations, harvesting of paddy and threshing, processing of wheat and rice and expelling of oil from oilseeds (AMC, 2017). In an attempt to assess the field level operation issues, the performance of the

agricultural machines in the field and requirement of the additional technologies, AMC conducted a farm mechanization need assessment survey in all 20 *Dzongkhags* (districts) from December 2017 to February 2018. The data reveals the need for AMC's involvement in many farm mechanization activities such as development of crop specific technology, regulate safety and distribution of quality farm machines and enhance capacity of the users on operation and maintenance of newly introduced agricultural and post-harvest machines (AMC, 2018). There may be substantial causes undermining the realization of the farm mechanization needs that can only be explored either through internal or external influences.

Examining external factors would be a remote option without determining internal institutional capacities such as operational functions, management practices and resources in realizing the organizational goals. Developing and effectively managing internal core competency can gradually tackle or reduce the risks of failure and provide befitting organizational change management with enhanced operational practice. Natalia Cybis Anna K. Baczyński, Rowiński, and Cybis (2016) argued that core competency directly or indirectly effects on the success of an organization. Thus, core competency was found as a preference to define the attributes possibly affecting the realization of the vision placed for farm mechanization in Bhutan.

1.3 Core Competency

The concept of “core competency” was first conceived as the basis of competitive advantage (Prahalad & Hamel, 1990) that has grown over the years with unanimous attention among researchers to explore and validate the findings. (Prahalad & Hamel, 1990) defined core competency as collective learning that include diverse production skills and integrate skills for the production of multiple unique technologies. The concept of core competency facilitates the identification and effective utilization of strength embedded with an organization since core competency

is the key factor for organizational success (Agha, Alrubaiee, & Jamhour, 2012; Ljungquist, 2007a). However, core competency concept has been poorly defined that led to operation and conceptual discrepancy (CLARDY, 2007; Yang, Wu, Shu, & Yang, 2006). Nevertheless, core competency concept evolved over the time and considered in both human resource management and strategic management perspectives (Yang et al., 2006).

With the contemporary strategic management namely, resource-based view, competence-based perspective and dynamic capabilities approach explained that capabilities are formed by resources and core competencies are flexible (Hafeez, Zhang, & Malak, 2002). He argued that resources, assets or capabilities are used in a generalized manner and these have not been explained relating them with an adequate theory which caused misunderstanding in contemporary management concepts.

Development of core competency is critical for the long term growth of an organization since it is widely used in the firms to enhance their performance (Jabbouri & Zahari, 2014). Agha et al. (2012) pointed out that abilities to develop, deploy or protect the core competencies are likely to differ from one to another organization. Similarly, Javidan (1998) suggested that core competencies reside as skills and area of knowledge resulted from the interaction of Strategic Business Unit's competencies which is often referred to as a construct formed with competencies of a firm. Moreover, Soderquist and Papalexandris (2010) suggested defining the central skills and behaviours of the employee for an organization to achieve its goals.

However, Lahti (1999) argued that defining a core competency is difficult as several core competencies can be derived within an organization and recommended describing the criteria of observation and measurement of its indicators than defining core competency as a construct. He said core competency is basically identified in two levels such as organizational level and individual level with different attributes. He

further stressed that an organization possesses core competency in the form of a collection of knowledge, skills, abilities and other characteristics (KASAO) and organizational strength as a whole which enables a firm to function more effectively.

Lahti (1999) stressed that individual core competencies are the set of knowledge, skill, ability and other personal characteristics (KASAOs) which include individual motives, interests and traits. The knowledge is the familiarity or awareness acquired by an employee through education, theoretical and practical understanding to perform a task, skill is the ability to perform a job using tools, equipment or machinery attained through repeated application, ability is the possession of mental and physical fitness to perform an action not necessarily requiring to use tools, equipment or machinery (Edgar & Lockwood, 2007; Lahti, 1999).

Organizational characteristics like the size considered in terms of the number of employees, the location of the establishment and the kind of service it provides were found to be influential on the effectiveness of the firm (Potasin & Thechatakerng, 2014). Jabbouri and Zahari (2014) also revealed that individual characteristics of employees such as age, qualification, service experience and position have an impact on their efficiency. Also, Asad-ur-Rehman, Ullah, and Abrar-ul-haq (2015) suggested that the performance of an organization may be improved with intervention of study on the relationship between individual characteristics such as age, gender, education and experience. Core competency leads to superior performance in many ways as it generates more efficient and effective performance. Moreover, (Agha et al., 2012) found a significant association among core competency dimensions and revealed that more core competencies have a greater level of impact on the performance.

Due to inadequate discussion on theory, study and validation processes in the previous study, the link between core competency identification and its associated concepts like competency, capability and resources are minimum although these have high influential importance (Ljungquist, 2008). The previous study not only lack clarity

on organizational processes to identify core competency and capabilities but also ways to exploit them (Javidan, 1998). Moreover, it's of the view of (Chen & Chang, 2011) that interpretation and application of core competence in a diverse manner created confusion among the researchers, scholars and practitioners causing risk of obstructing on future research.

On the other hand, the existing literature of core competency mainly focus and relate to profit-generating organizations (Andersson & Reid, 2011) particularly in developed countries like America, Europe, Asia and the UAE (Jamhour & Agha, 2010). Moreover, the study on the core competency of the non-profit organization is limited (Andersson & Reid, 2011). We realized that the organizational and individual core competency of a government organization was not assessed in combination through mixed-method approach. Moreover, it is also evident that the previous study assessed either the organizational core competency with organizational performance or individual core competency with individual performance. The current study was firstly focused on the identification of components for organizational core competency (OCC), individual core competency (ICC) and performance. The OCC and ICC were further examined with their influencing characteristics and also confirmed the effect of core competency (organizational and individual) on performance (organizational and individual).

2 Research Questions:

- What is the organizational and individual core competency of the Agriculture Machinery Centre?
- How core competency effect on performance?
- What is the guideline to strengthen the organizational and individual capacity of the Agriculture Machinery Centre?

3 Research objectives:

- To identify the organizational and individual core competency of the Agriculture Machinery Centre.
- To study the effect of the core competency to performance.
- To develop a guideline to strengthen the organizational and individual capabilities of the Agriculture Machinery Centre.

4 Significance of the study

The systematic and comprehensive framework with a detailed mapping of core competency would facilitate an organization to achieve its goals and aspirations (Yang et al., 2006). The farm mechanization is one critical area that requires major focus and more attention to alleviate drudgery in the Bhutanese farm which can be intervened through enhancement of core competency of AMC which is mandated to overall farm mechanization needs in Bhutan. This study is expected to set a paradigm model for sourcing farm mechanization needs in Bhutan.

With the trend of young people migrating to urban areas in search of better opportunity, the farms in the countryside face acute labour shortages and wages have been increasing drastically leading to price inflation of agricultural products (MoAF, 2016). Since the agriculture sector contributes 16.18% (PPD, 2015) to national GDP and employs 58% of its population for livelihood (NSB, 2017), this study would ensure uniform management practice of organization that will ultimately contribute towards realizing the food self-sufficiency goal by boosting rural economy and creating employment opportunity in the rural farming community.

Enhancing core competency of AMC would benefit the country to import and distribute quality farm and post-harvest machines, develop and introduce appropriate innovations (tools and implement) applicable in Bhutanese farm, frame and implement farm machinery standards to ensure quality and impart capacity building

trainings for the operation and maintenance of the farm machinery and post-harvest machines.

This study also established a link to identify the respective core competencies with relevant components, attributes and indicators. Unlike other studies, besides extending theory to a government organization in a developing country, it also contributed to assess both organizational and individual core competencies with their effect on respective performance through both qualitative and quantitative approach. Moreover, this paper may serve as a basic reference for government organizations, corporate sectors and private establishments in Bhutan to build their core competency to be more effective and efficient in realizing organizational goals through assessment of organizational and individual strengths. Furthermore, it may also serve as a reference for future organizational development research to assess the competency, capability and resources of an organization and leadership and motives of individuals.

5 Scope of the Study

Unlike earlier studies mostly conducted in developed countries like Europe, Asia, Middle East and America, the current study was carried out in Bhutan, a South-Asian country with more focus on social mandate instead of emphasizing on commercial gain. The study was conducted from November 2017 to July 2019 by selecting the Agriculture Machinery Centre and its staff which plays a vital role in achieving food self-sufficiency goal in Bhutan and has broader linkage with the central government, local government, corporations, private sectors and farmers from across the country (AMC 2012-2017). The study also considered the staff of all levels such as operational, supervisory and support, professional and management, executive and specialist category respectively. Respondents were aged between 20-60 years and service experience ranges from fresh recruit to more than 30 years. The overall

respondent accounted for 62 employees working for the AMC, department of agriculture, Ministry of Agriculture and Forests.

6 Definition of study terms:

Core Competency: refers to a phenomenon/construct derived from the organizational and individual core competency.

Organizational Core Competency: refers to the unique strength attributed by the competency, capability and resources of AMC.

Individual Core Competency: refers to the unique strength attributed by the leadership and motives/traits of individuals in AMC.

Performance: refers to the organizational and individual performance of AMC.

Organizational Performance: refers to the output/achievement of the respective sections under AMC.

Individual Performance: refers to the output/achievement at the individual level in AMC.

Organizational Characteristics: refers to the location and type of services of AMC.

Individual Characteristics: refers to the gender, age, position, qualification and experience of individuals of AMC.

Chapter Two

Literature Review

2.1 Introduction

This chapter reviewed various theories, models and concepts on core competency, organizational core competency, individual core competency and performance of the organization and individual respectively. An attempt was made to see the link between these variables and potential influencing characteristics of the organizational core competency and individual core competency. Finally, a model was adopted for this study based on the findings and recommendations of the previous study.

2.2 Core Competency

The term “core” is used in multiple ways and its actual meaning is still unclear (Spacey, 2016). According to Lahti (1999), “core” refers to the key factors or baselines whereas the meaning of “competency” was argued to be debatable as it was referred to many forms such as organizational capability, resources and human resource capacity. However, (Spacey, 2016) suggested that competence is the ability that an individual or a firm possesses or is good at whereas the “core competency” is something that is essential for an individual to be good at or a firm to attain success. Thus, this study refers the core competence as core competency as both seem to have a similar meaning and subjective in nature.

The integration of knowledge, human resource, financial and other pool capitals like non-financial of organization which contributes a meaningful competitive advantage can be referred to as core competencies as these are the strategic competitive position of the firm (Enginoğlu & Arikan, 2016). Although, different background and history about the formulation of core competency concept were

highlighted (Agha et al., 2012), the most popular and pertinent one was the concept established by (Prahalad & Hamel, 1990) which was defined as “collective learning” and the basis of competitive advantage. It considers three following criteria, 1) market access, 2) customer benefit and 3) unique product that cannot be imitated by rivals. This concept has drawn substantial progress among the researchers to explore and validate the findings of core competency mostly focused on business strategy (Andersson & Reid, 2011). A comparison of core competency definition is presented in (Table 1):

Table 1: Core competency definition by different authors:

Definition	Author	Year
Core competency is a strategic tool or coordination ability of a firm.	Enginoğlu & Arıkan	2016
Core competency is a critical source of profit and a key factor for the formulation of business strategy.	(Agha et al.,	2012
Core competence is something that uniquely sets an organization among others of field.	Andersson & Reid	2011
Core competency is capability vested with a firm to create a competitive advantage.	Chen & Chang	2011
Core competence is a specific organizational signature that provides a competitive advantage by introducing winning products in the market.	Uysal	2007

Core competency is an organizational phenomenon that consists of diverse knowledge and skills held by its members.	Edgar & Lockwood	2007
Core competency is a construct formed with competencies of a firm	Javidan	1998

Drawing on these definitions, core competency exists as a phenomenon or a construct in the form of organizational or individual strength (Campion et al., 2011; Soderquist & Papalexandris, 2010). Prahalad and Hamel (1990) also pointed out that core competency is essentially a construct involving a diverse commitment of working beyond organizational boundaries with many levels of people and functions. The core competency comprises the collective learning of organizations as well as individuals.

2.3 Organizational Core Competency

An organization can establish its core competency by identifying a field of expertise, complex streams of business activity that it does well (Fernando, n.d). (Edgar & Lockwood, 2007) believes that core phenomenon like general product/service technologies, product/service classes, functional and technological skills and integrated skills are the components of organizational competency. These perspectives can be further summarized into generic, organization-specific, managerial and operational competencies with competencies as skills and competencies as behaviours (Soderquist & Papalexandris, 2010). Organizational competency is an organizational phenomenon that consists of diverse knowledge and skill (Edgar & Lockwood, 2007). Similarly, competency of an organization refers to the strength of a company that includes strategy, advantage and technical capacity (Spacey, 2016).

An organization possesses core competency in the form of organization level of core competencies which can be exemplified indirectly through observable and measurable indicators (Lahti, 1999). He further stressed on the existence of

organizational core competence by pointing on the integration of various skills and technology refers to the collection of knowledge, skills, abilities and other characteristics (KSAO) also see: (Campion et al., 2011; Soderquist & Papalexandris, 2010). Javidan (1998) suggested that organizational core competency resides in the highest level of the construct as a collection of competencies attributed by associated concepts like competency, capability and resources. However, the core competency is featured by the link of development, adaptation and utilization conceived from associated concepts like competencies, capabilities, and resources (Ljungquist, 2008) also see (Uysal, 2007).

Inadequate discussion on theory, study and validation processes in the previous study, the link between identification and associated concepts are minimum despite its potential influence on core competency (Ljungquist, 2008). Uysal (2007) recommended that core competency must be developed based on capabilities, resources and organizational learning as it is related to knowledge, skills, expertise and allocation of resources. Analyzing competencies, capabilities and resources of a firm will benefit to identify external opportunities and internal strengths to best exploit core competencies meaningfully (Javidan, 1998). Moreover, Ljungquist (2007a) established competency, capability and resource as the fundamental features of associated concepts of organizational core competency since these features have conceptually and empirically differed characteristics. The associated concepts are discussed in the following sections:

I Competency

Organizational context like culture, vision, strategy and mission facilitates a conceptual link to develop core competency (Chen & Chang, 2011). Therefore, a

different organization may have a different set of competency (Natalia CybisAnna K. Baczyński et al., 2016) since generalizability of core competency model is minimum due to typical internal factors embedded with organization structure, strategy, vision and mission (Graber, 2012). Campion et al. (2011) argued that the development of competency differs organizational preferences, for instance, a firm that views customer satisfaction as its competitive advantage is likely to promote products while companies desiring technical output will generally prefer critical skills. They also opined that identification of competency may begin with organizational context like goals and objectives including fundamental and technical competencies. Agha et al. (2012) also stressed that shared vision considers the organizational goal, policy and priority that are also crucial to enhance business excellence and success. A competency which is a construct can only be measured through the indirect means of observing or measuring its behaviours (Lahti, 1999). In other words, a competency is a cross-functional integration which coordinates an organization's capabilities (Javidan, 1998)

II Capability

Core competencies should be selected based on the organization's capabilities (Graber, 2012) as any function related to organizational production is organizational capability (CLARDY, 2007). A capability is inherent in a function as capabilities are functionally based which include key functional areas like performance management attributed by goal setting, monitoring and review (Hafeez et al., 2002; Javidan, 1998). In other words, the capability is a set of organizational processes and operational practice that develop a unique product with quality and it should have priority in establishing core competency (Uysal, 2007). (Ljungquist, 2007b) expressed that systems and routines often play a critical role in providing effective undertakings and development of an organization through activities and processes. Systems are the key to expedite organizational success that can also be applied to structure core

competencies with routines to prioritize processes of a firm (Ljungquist, 2008). The processes, systems or protocols in many organizations are fully or partially outdated which doesn't fit the current scenario of client-driven demands (Atkinson, 2017). Moreover, a key factor for strategy development is the Integration of organizational system which is facilitated by common policies, action plans and decision processes (Zangiski, Lima, & Lima, 2013). Internal capabilities of a firm are the basis for competencies (Clardy, 2008) and these are the firm's ability to use its resources (Javidan, 1998).

III Resources

An organization exists with a combination of tangible and intangible resources. The resources are categorized into three groups as physical, human resource and organizational resources (Chen & Chang, 2011). Physical resources include infrastructure, strategic location, equipment and office utilities and human resource refers to the management team, skilled manpower and general support staff whereas organizational resources consist cultural diversity and reputation (Javidan, 1999). The resource base view (RBV) also stresses that the firms usually have unique assets and or capabilities (Hafeez et al., 2002) that are considered as inputs in an organization's value chain (Javidan, 1998; Ljungquist, 2007a). Popularly, resources are defined in terms of tangible and intangible assets possessed by an establishment. The properties owned by a firm in the form of equipment or building is tangible assets and patents or copyrights are considered as intangible resources (CLARDY, 2007; Hafeez & Essmail, 2007). Employees can be considered as the most important intangible asset in an organization (Natalia CybisAnna K. Baczyńsk et al., 2016) and human resource is the tool to exploit other resources meaningfully to fulfil the organizational goal (Asad-ur-Rehman et al., 2015; Hafeez & Essmail, 2007; Pujiwati & Susanty, 2015). Yang et al.

(2006) stated that examining the external factors ensures the adaptability and assessing internal resources greatly helps distinguish the core competency of an organization.

Hypothesis 1-Organizational Characteristics

The influencing characteristics of the organizational core competency are the size, type of business and location of the firm. (Hafeez & Essmail, 2007) stressed that organizational core competency is related to organizational characteristics. The human resource development literature reveals that competency in terms of individual skill proficiency generally neglects core competencies as organizational characteristics. Moreover, Potasin and Thechatakerng (2014) described the characteristics of the enterprise as the size of the firm, type of service, experience, form of the establishment and location of the firm. They also revealed that the total number of employees, type of business or service and location of the firm determine the success of an organization. Therefore, we proposed the following hypothesis:

H1: The types of services and location of the office have influence on organizational core competency.

2.4 Individual Core Competency

Edgar and Lockwood (2007) argued that organizational competency is an organizational phenomenon that consists of diverse knowledge and skills held by its members. Core competencies are the collective learning that includes diverse production skills and integrate skills for the production of multiple unique technologies (Prahalad & Hamel, 1990). Referring to “collective learning” and “integration of skills“, core competency at an individual level is inherent since these are solely human efforts. The individual level of core competencies are mainly functional or human efforts clustered in three dimensions that include competencies dealing with people, business and self-management (Cripe, 2002). With the identification and definition of core

competency in various aspects, terminologies pertaining to core competency increased dramatically over the last nearly three decades. Yang et al. (2006) classified and summarized list of 22 competency items from over 600 terms and 54 clusters using process-oriented core competency identifying (POCCI).

Individual core competencies are diverse and exemplified in the form of core employee competencies, core manager competencies and core leader competencies (Graber, 2012). According to Natalia CybisAnna K. Baczyńsk et al. (2016), individual competency is defined in terms of KSAOs knowledge, skills, abilities and other characteristics also see: (Campion et al., 2011; Lahti, 1999) which include motives, interests and individual traits. The knowledge is the familiarity or awareness acquired by an employee through education, theoretical and practical understanding to perform a task, skill is the ability to perform a job using tools, equipment or machinery attained through repeated application, ability is the possession of mental and physical fitness to perform an action not necessarily requiring to use tools, equipment or machinery (Lahti, 1999). (Chen & Chang, 2011) stressed knowledge, skills, traits and ability of a person as a factor for individual core competency.

I Motives/Traits

As discussed in the previous sections, the individual core competency is the integration of KASAOs that are crucial for the success in one's organization (Lahti, 1999). Human resource development scholars defined competency as individual skills (Clardy, 2007). Similarly, Human resource management considers the capability of employees in executing their job as a core competency (Chen & Chang, 2011). The capabilities, skills and motivation of an employee is a crucial component to develop core competency since intellectual assets are motivation, employee effort, technical or professional expertise, relationships and management processes (Hafeez & Essmail,

2007). The behaviours that help distinguish competencies normally have expected and relevant values (Natalia CybisAnna K. Baczyńsk et al., 2016).

Further, motives cause job preferences which may lead to the establishment of many competencies (Guillén & Sarisj, 2013). The realization of objectives pertaining to an organization depends on the motivation, skills and talent of its employees. Natalia CybisAnna K. Baczyńsk et al. (2016) defined 10 competencies frequently appeared in the previous competency model that is: communication, focus on achievement and result, focus on customer satisfaction, cooperation, leadership, planning and organization, awareness of commerce and trade, flexibility, adaptability, stimulating development in others and problem-solving (Baczynsk, 2016). Nevertheless, individual competency can be grouped into five categories such as motives, traits, self-concept, knowledge and skills (Yang et al., 2006). Therefore, this study considered the motives/traits as one component of individual core competency.

II Leadership

The leadership is also a key factor for both organizational and individual core competency which is defined as the art of flexible developmental process related to many levels of individual and organization (Ward, 2018). It assesses the level of transformation from current status to future priorities by enduring viable achievement within a short period of time (Atkinson, 2017). (Campion et al., 2011) believed that leadership creates access to growth and development for individuals or groups, provides guidance and support to achieve goals, motivates individuals to perform efficiently and capitalizes the strength of individuals. The theories on leadership continued to emerge over the years that are defined as great-man theory, trait theory, contingency or situational theory, style and behaviour theory, process leadership theory, transactional theory, transformational theory and none of these are completely unrelated (Nawaz & Khan, 2016). Therefore, Hussain and Hassan (2016) through an

extensive review of the literature revealed 28 pertinent leadership styles out of which four leadership factors such as transformational, authoritative, democratic, and pacesetter were suggested as fundamental leadership style for a leader in any department, company, family or country.

Leadership allude to the techniques which its subordinates are directed (Hussain & Hassan, 2016). It is commonly defined based on 10 popular elements such as vision, motivation, serving, empathy, creativity, thoroughness, managing, team building, taking risks and improving (Gamelearn, 2016). However, leaders can be defined in three categories such as autocratic leader defined by its nature of decision made without involving subordinates, laissez-faire leader who lets the subordinates take the decision and democratic leader known to take decision while involving subordinates (Nawaz & Khan, 2016). For individuals to develop skills associated with an organization's priorities, the management must understand the needs, differences, situations and behaviours of individuals which may enable them to acknowledge organizational complexity (Al-Khoury, 2010). Natalia CybisAnna K. Baczyńsk et al. (2016) also suggested a basic set of competencies for leaders and employees that include communication, focus on achievement and results, cooperation, leadership, planning and organization, flexibility, adaptability, stimulating development in others and problem-solving.

Hypothesis 2-Individual Characteristics

Hussain and Hassan (2016) used individual characteristics like gender, qualification, age and position of an individual to determine the leadership styles also see (Asad-ur-Rehman et al., 2015). Sricham and Thechatakerng (2017) in their study of network structure in Uttaradit Province found the women representation

comparatively higher than men as socioeconomic factors of entrepreneur and most of them were above 50 years of age and lesser number were observed below the age of 30. Similarly, they revealed that experience also played a critical role in terms of the income of entrepreneurs, while higher the qualifications, greater the success were observed, moreover, Potasin and Thechatakerng (2014) discovered that to become an entrepreneur, men are more potential than women, married ones are better than others and people of higher education level had more influence than those with lower education background. Thus, the following hypothesis is proposed:

H2: individual characteristics like age, gender, position, experience and qualification influence on individual core competency.

Hypothesis 3 - Effect of Core Competency to Performance:

2.5 Performance

Lahti (1999) stressed that core competencies are a potential source of enhancing organizational and individual performance if both are integrated with the same base for performance. He also recommends to assesses both to complement each other as bringing change in one system of an organization usually affects the other. Core competency pursued in line with strategic management and human resource management will benefit competitive advantage at organizational performance level and job performance at individual level respectively (Chen & Chang, 2011). Further, Uysal (2007) explained that a core competency determines the performance of the firm as it constitutes organizational knowledge, expertise, system, technology skills, capabilities, experience and resources.

Whatever an organization does, the focus should be on outcomes that are usually consumed by clients, customers, citizens, residents, taxpayers, patients, account holders and others (Atkinson, 2017). Performance normally occurred in organizational workflow, processes or administrative practices (CLARDY, 2007). Core

competencies can provide a renewed source to sustain high performance through operational, learning and innovation (Clardy, 2008) as reinforcement of same competencies can effectively operationalize organizational goals (Campion et al., 2011). Based on the mandate and functions, the organizational performance of AMC can be considered for the innovation of technology, quality control and trainings imparted from the day of its reform in 2016.

Core competencies especially the skilled routines coordinate the performances of people in many different jobs that yield superior organizational performance (CLARDY, 2007). The knowledge, skills and abilities that contribute for performing well are the competencies since the competencies segregate the top performers (Campion et al., 2011; Graber, 2012). If core competency involves the integration of several technologies, it also involves coordination of works and delivery of satisfaction (Prahalad & Hamel, 1990) which is a positive attitude gained upon the fulfilment of one's job (Pujiwati & Susanty, 2015). HEIJDE and HEIJDEN (2006) stressed that the work performed by employees benefit individuals to gain experiences that are accounted as knowledge and skills ultimately implied to shoulder a wide range of responsibility. They also expressed flexible employees gain diverse experiences and benefit for career advancement while exposing themselves to the change and acknowledging the opportunity. The organizational learning can be defined in technical and social perspectives that are studied based on individual experience, exchange of experience and interrelations among people and groups in an organization (Zangiski et al., 2013). In contrary, (Al-Khouri, 2010) argued unless an individual is motivated, the organizational procedures and system may not ensure greater performance and improvement of performance depends on ability and motivation of an employee which is embedded with education, experience and training.

Organizational culture, leadership and work climate are some factors for increasing organizational effectiveness (Clardy, 2008). Natalia CybisAnna K. Baczyńsk et al. (2016) argued effective job performance rely on individual competencies that are

defined in terms of KASAOs. The capability of an organization is not a core competency but it has the scope to become a core competency when it becomes the source of organizational performance since core competency leads to superior performance in many ways as it generates more efficient and effective performance (CLARDY, 2007). Nonetheless, Jabbouri and Zahari (2014), after assessment of organizational dimensions such as resources, capabilities, human resource, including operation functions revealed that the core competencies have a positive impact on organizational performance. Similarly, (Agha et al., 2012) suggested a significant association among core competency dimensions and revealed core competency as a potential determinant of organizational performance. Therefore, the following hypothesis is proposed.

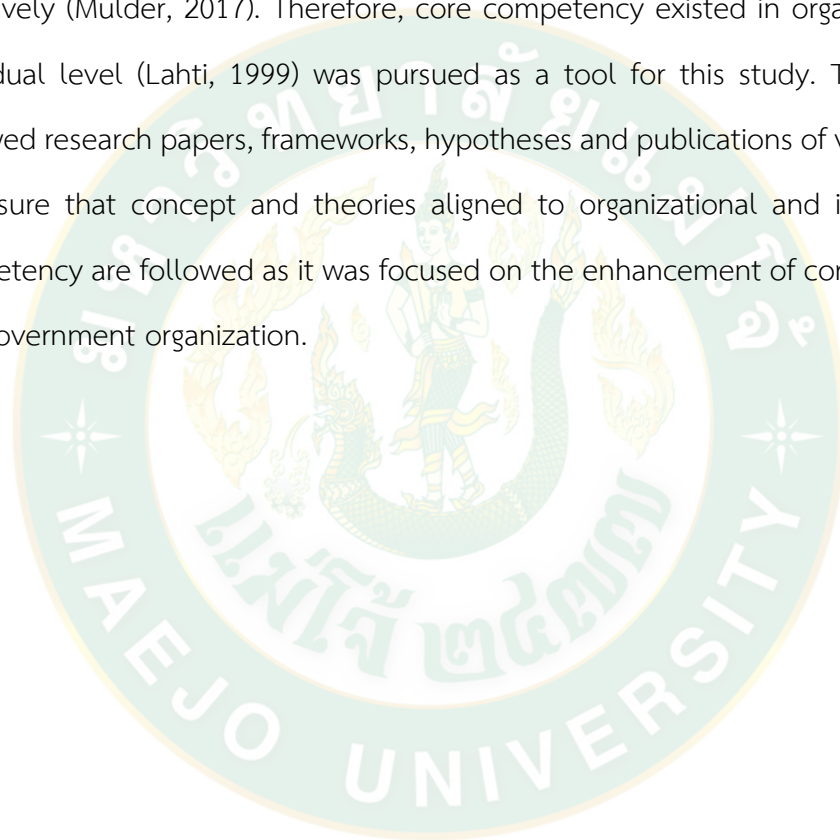
H3: There is effect of core competency (organizational and individual) on performance (organizational and individual).

2.6 Theory/Concept

Prahalad & Hamel (1990) established core competency as collective learning that includes diverse production skills and integrate skills for production of multiple unique technologies. However, Javidan (1990) argued the definition “collective learning” by pointing the identification of core competence as limited to company’s value chain and recommended a hierarchical process of in-depth analysis of resources, capabilities and competencies of a firm that will benefit to identify external opportunities and internal strengths to exploit competencies meaningfully. Similarly, (Ljungquist, 2007a) after assessing the difference between associated concepts such as competence, capability, and resources pertaining to conceptual and empirical definitions, and hierarchical characteristics said that core competency does not necessarily require to be identified empirically as it can be distinguished analytically.

Theories on core competencies and competitive advantage are based on resource, explain how internal resources can be identified, used or managed to sustain competitive stand (Andersson & Reid, 2011). The exaggerated focus on the business

development through private sector generally minimized consideration to the public organization which faces challenges that are not easily tackled over a short period of time (Christensen, Lægreid, Roness, & Røvik, 2007). Moreover, Max Weber's Bureaucratic theory featured five principles such as task specialization, hierarchical of authority, formal selection, rules and requirements, impersonal and career orientation that are believed to benefit organizations to become structured and function effectively (Mulder, 2017). Therefore, core competency existed in organizational and individual level (Lahti, 1999) was pursued as a tool for this study. The study also followed research papers, frameworks, hypotheses and publications of various authors to ensure that concept and theories aligned to organizational and individual core competency are followed as it was focused on the enhancement of core competency of a government organization.



2.7 Proposed Model (Fig.2)

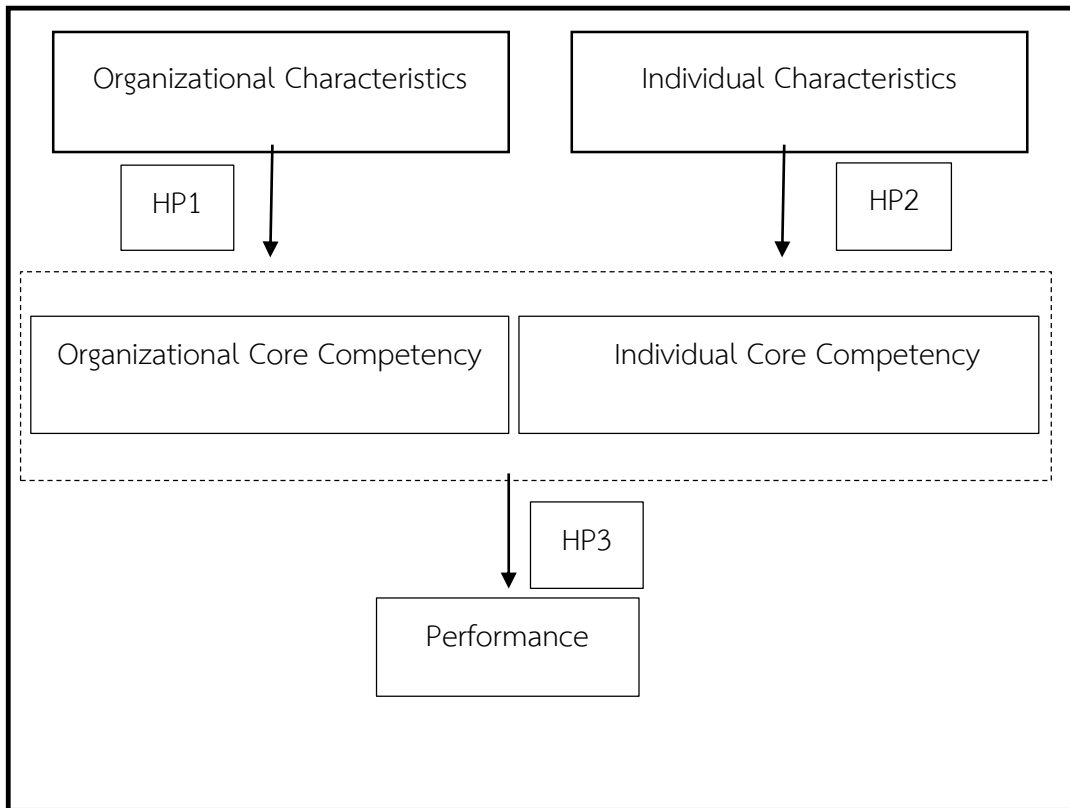


Figure 2: Hypotheses and Variables

Chapter Three

Research Methodology

3.1 Introduction

The research methodology was the navigation to direct the researcher towards clarity of unanswered questions formulated in chapters one and two. As such, this chapter presents research design, the research method, research place and population, research tools & data collection, validity & reliability of research tools and data analysis & measurement.

3.2 Research Design

Exploratory design pertains to the case studies, observations and structured interviews etc. for a realistic understanding of the construct being studied (Kothari, 2004). Also, explanatory design merits an investigation of the status and related phenomenon concerning the variables through experiments, surveys/questionnaires and determines the hypotheses statistically (Kothari, 2004). The current study firstly involved assessment of secondary data on opinion, demographic information, condition, procedure and attitude of various theories and collection and analysis of primary data in the form of qualitative and quantitative. The qualitative study was conducted to identify the variables of the organizational core competency, individual core competency and performance. These variables were then used to frame questionnaire to obtain the information and determine their status to test hypotheses. Consequently, the design used for this study was exploratory sequential mixed-mode (Creswell, 2013) to depict the status of the subjects studied.

3.3 Research Method

This study was intended to assess the phenomenon of organizational core competency, individual core competency and performance of the organization and

individuals of the Agriculture Machinery Centre. The qualitative method was necessary to identify the components of the core competency of the Agriculture Machinery Centre and its employees. Furthermore, these components were critical to undertake the analytical tests to determine the frequency, weight, importance, correlation, significance and effects of the study variables. Therefore, mixed-method approach was applied for this study.

3.4 Research Place and Population

The earlier study of core competency was mostly conducted in developed countries with tremendous focus on commercial gain and competitive advantage to ensure the sustainability of business establishments. The current study was carried out in Bhutan, an underdeveloped country existed in the South-Asian region with a focus on fulfilling social mandate rather than commercial gain or competitive advantage. Considering the relevance, the key stakeholders namely: Department of agriculture, agriculture engineering division and heads of respective sections (Table 2) under AMC are selected as population group for the qualitative purpose. Subsequently, the Agriculture Machinery Centre and its entire staff (Table 3) was identified as the population for quantitative data.

Table 2: Respondents of the interview:

Sl. #	Position	Office	Persons
1	Specialist	Specialist in AMC	1
2	Director	Head of Department of Agriculture	1
3	Chief Engineer, Engineering Division	Head of Engineering Division	1
4	Program Director, AMC	Head of AMC	1
5	Administrative Officer	Head, Administration Section	1

6	Agriculture Engineer	Head, Research Section, AMC	1
7	Principal Agriculture Officer	Head, Certification Section, AMC	1
8	Asst. Agriculture Engineer1	Head, Training Section, AMC	1
9	Manager	Head, Regional Office, Eastern region	1
10	Manager	Head, Regional Office, Southern Region	1
Total			10

Table 3: Respondents of the survey:

Sl. #	Name of the Section	Location	No. Staff	No. of staff by level			
				EX/ES	P	SS	O
1	Administration and Finance	Paro	15	2	7	3	3
2	Research section	Paro	13	-	4	7	1
3	Certification section	Paro	7	-	1	5	1
4	Training section	Paro	11	-	1	6	4
5	Southern Region	Samtenling	10	-	1	7	2
6	Eastern Region	Khangma	6	-	1	4	2
Total			62	2	15	32	13

Note: Out of 20 districts in Bhutan headquarter of AMC in Paro covers 8 districts of the western and central region while two regional offices cover six districts each under southern and eastern region which means this study ensured the coverage nationwide while stakeholders include only key stakeholders involved in farm mechanization technology generation services.

3.5 Research Tool and Data Collection

This study encompassed two major areas involving a theoretical and practical learning process. On the theoretical process, the secondary data such as journal

articles, theses, scientific reports annual reports, policy documents, research books and many other online sources were reviewed. The secondary data were mobilized through google scholar, MJU E-journal catalogues, MJU library catalogues and British library. In addition, reports and publications of the Royal Government of Bhutan were mobilized through numerous websites of Bhutan. On the practical side, a structured interview (Coughlan, 2009) was administered followed by a survey on the dimensions concerning organizational core competency, individual core competency and performance and mobilized data. The structured interview consists of eight open-ended questions related to competency, capability and resources for organizational core competency, while individual core competency was factored with leadership and motives/traits. The survey was conducted on 10 demographic information and 36 Likert type on a five scale range starting from strongly agree to strongly disagree designed based on the relevant sources (Andersson & Reid, 2011; Jamhour & Agha, 2010).

3.6 Validity and Reliability of Research Tools

To ensure the validity, the interview questions and survey questionnaire was reviewed by the three academic committee members from the Faculty of Business Administration, Maejo University who are specialized in research construct under the study and incorporated their valuable comments. Furthermore, the researcher has more than 10 years of work experience in the same field.

For the reliability test of the survey questionnaire, the minimum acceptable range of Cronbach Alpha (α) ≥ 0.7 (Gliem & Gliem, 2003) was set to measure the internal consistency of variables (Table 4). The overall α score was 0.928 for 36 items while organizational performance observed highest α at 0.904 and competency got the lowest α at 0.735 among variables defined for this study.

Table 4: Reliability Test Result:

Variable	Sequence	Components	Items	Alpha (α)
Organizational Core Competency	1	Competency	3	0.735
	2	Capability	4	0.891
	3	Resources	3	0.842
Individual Core Competency	4	Leadership	5	0.717
	5	Motives/Traits	10	0.803
Performance	6	Organizational Performance	6	0.904
	7	Individual Performance	5	0.741
Overall reliability			36	0.928

3.7 Data Analysis and Measurement

The content analysis and thematic textual interpretations were applied for qualitative data and statistical measures like frequency, percentage, mean, standard deviation, T-test, ANOVA, simple linear regressions were used to test the weight, importance; correlation, significance and effects of study variables and to determine hypotheses.

Chapter Four

Analysis of Results

4. Result

This chapter consists of results in two parts namely qualitative and quantitative. The qualitative part presents the findings of a structured interview and the quantitative part illustrates the results of statistical analysis.

4.1 Qualitative Result

A structured interview was conducted to 10 managers of AMC on eight open-ended questions to identify the components and attributes related to organizational core competency, individual core competency and performance.

4.1.1 Organizational Core Competency

Out of eight questions, three questions were focused on the identification of attributes related to competency, capability, and resources.

i) Competency

From the interview, 80% of the respondents shared their views of AMC's incapability to meet the requirements due to non-clarity of the vision, mission and mandates until it was reformed in 2016 (Table 5). They expressed that the vision of AMC was to fulfil the short-term demand of stakeholders before its reform. In addition to their mandates of conducting research, training and quality control activities, AMC had huge commercial mandates in the past such as hiring services, sales of machines and spare parts, repair and maintenance of farm machines.

In addition, 40% supported that due to inadequate institutional capacity in terms of qualified human resources, financial resources and the limited number of staff hindered the service delivery of AMC. Apparently, in the past farmers and clients acquired more services like hiring, sales and maintenance that were of commercial in nature overlapped with the vision, mission and mandates of research, quality control and training. Consequently, affecting the effective delivery of farm mechanization services. In contrast, some respondents blamed geographical topography such as small field terrain, inaccessibility of road and diverse agro-ecological areas as the attributed reason for inefficiency.

Nevertheless, the entire population expressed that commercial mandates are now delinked to another organization and AMC's vision, mission and mandates are renewed and much clearer since 2016. Therefore, the majority of respondents reflected the vision, mission and mandate as attributes contributing to competency in the context of this study.

Table 5: Attributes and indicators for the competency by number of respondents:

Component	Attributes	Indicators	Interviewees
Competency	Vision	No clarity and Short term before	8
	Mission	No clarity before the reform	8
	Mandate	Huge commercial responsibility	8
	Human & financial resource	Less qualified, the limited number of staff and budget	4
	Topography	Geographical conditions	1
	Vision, mission & mandate	Clarity of vision, mission and mandate since 2016	10

ii) Capability

Variations were observed on opinions for this part as illustrated in Table 6. At the most, 70% of respondents said that AMC being a government organization, it has to fulfil prescribed targets within a specific planned period. They were of the views that a consolidated organizational plan for five years is framed and adopted in consultation with relevant stakeholders. At least 40% of the interview members pointed out that a performance agreement is instituted between relevant authorities to accept a minimum portion of the plan to implement annually and these activities are further linked to individual's work plan in the office to ensure the execution on time. On the other hand, 40% stated that in the past planning was mostly done based on the allocated fund and need of farmers. Similarly, 70% mentioned that to ensure timely implementation of activities, an open discussion forum was facilitated on weekly, monthly, half-yearly or annually which not only promotes the conducive working environment but also ensured the review on the status of activities already implemented.. Moreover, 80% of members abetted that a system exists to measure and rank the level of organizational and individual outputs at the end of every year. Therefore, the critical areas for the capability of AMC depend in its planning, execution, monitoring and evaluation systems.

Table 6: Attributes and indicators for the capability by number of respondents:

Component	Attributes	Indicator	Description	Interviewees
Capability	Planning & execution	Organization plan	Five year and annual work plan target	7
		Individual plan	Share of work from the annual organization plan	4
		Past experience	Planning based on allocated budget and farmer's need	4
	Monitoring	Inclusive environment	Open and frequent discussions	7
		Review	Past and ongoing activities	4
	Evaluation		Organizational level performance evaluation Individual level performance evaluation	8

iii) Resources

Different type of resources were recognized in the form of tangible, intangible and combined resources (Table 7). The study found that 80% interviewees felt that AMC has suitable infrastructure and utilities according to the size of their mandate. Nevertheless, 50% expressed the need for additional intangible resources like human resource expertise, technical expertise and financial capitals to fulfil their mandates effectively. A unique response was the grant assistance provided by the development/donor partners. Hence, tangible, intangible and combined resources are the attributes for the component of resources.

Table 7: Attributes and indicators for resources by number of respondents:

Component	Category	Indicator	Description	Interviewees
Resources	Tangible	Infrastructure	Land and building	8
	Tangible	Financial capital	Fund allocated by the government	5
	Intangible	Human capital	Human resource skills and knowledge	5
	Tangible	Utilities	Vehicles, equipment, tools, implements or office stationery.	8
	Intangible	Technical expertise	Skills gained from performing a job repeatedly.	5
	Both	Grant assistance	Support in the form of fund, machinery and HR expertise (volunteer).	4

The components of organizational core competency consist of competency, capability and resources derived from respective attributes. The summary of components and attributes for organizational core competency are identified in (Table 8).

Table 8: Components and attributes of organizational core competency:

Variable	Components	Attributes
Organizational Core Competency	Competency	Vision
		Mission
		Mandate
	Capability	Planning
		Execution
		Monitoring
		Evaluation
	Resources	Tangible
		Intangible

4.1.2 Individual Core Competency

i) Leadership

Considering the importance of leadership, respondents were asked to describe the leadership qualities in AMC to identify the elements of their leadership.

The perspective differed among respondents were grouped based on similarities and further linked to a prominent leadership element (Table 9). Maximum of 80% responders reflected the importance of motivating and rewarding factor. However, 40% of them shared that qualified and enthusiastic leader inspires followers by respecting and acknowledging their feedback and comments. At least 30% added that good leadership knows the reality of the situation when subordinates failed to fulfil an assigned task. Moreover, 50% were of the view that compensating someone's effort and sacrifices for their duty often leads to encouraging others in shouldering collective responsibility.

Moreover, 70% of interviewees described visionary thinking as another important leadership element for this study. 40% shared that the leader must create a comprehensive strategy to overcome any organizational challenge experienced while

in the process of implementing activities. 30% interviewees opined that the leader should take an affirmative decision in the office as decision making often involves the risk of wasting resources and undermining its employees. While, 20% expressed determination and ethical behaviour.

In the same way, 70% informants were of the view that engaging all possible staff in the organizational process like planning, execution, monitoring, or evaluation would open rooms for them to gain more experience. Further, 50% stated that involving individuals in different fields of work enables them to help enhance their working skills. Whereas, 30% of respondents felt the regular supervision and guidance of manager as techniques to promote continued learning among their staff. Thus, continuous improvement is an attribute of leadership.

Similarly, 60% of respondents expressed that the leadership in AMC encourages every staff to work diligently to achieve the common goal of the organization. They felt that all organizational members are driven to meet the obligations behind every single activity with clear directions on the steps to follow and reach out to the final result. Therefore, result driven approach can be considered as one factor for leadership.

The planning and prioritizing was indicated as the final element for leadership in the study. 50% expressed that although organizational activities are planned according to the institutional capacity, an implementation strategy of activity is necessary to prioritize the implementation of activities approved by the relevant authority. They also said implementation of activity involves various stakeholders which demand collaboration with stakeholders. In the same way, 40% of informants felt that capitalizing an individual's specific talent on right time may ensure smooth implementation of planned activities.

Table 9: Attributes and indicators for the leadership by number of respondents:

Component: Leadership		
Elements	Indicators	Informants
Motivating and Rewarding	Possess the right qualification and aptitude	8
	Value suggestions, feedback and comments	4
	Understand the basic reality and be flexible with it	3
	Reward and compensate for hard work and cherish the sacrifices of the staff	5
	Encourage everyone to work collectively	
Visionary thinking	Establish a dynamic approach	4
	Make a firm decision and be held accountable	3
	Demonstrate determination and ethical behaviour	2
Continuous improvement	Engage all potential staff in the process of encouraging participation	7
	Facilitate on-the-job learning	5
	Provide guidance as and when necessary	3
Results-driven approach	Personal drive or ability to encourage the staff to achieve a common outlook	6
	Encourage combined efforts to achieve the same organizational goals	
	Show clear direction to achieve objectives	
	Emphasise on clarity and transparency of the expected results	
Planning & Prioritizing	Plans based on institutional capacity and their implementation on a priority basis.	5
	Facilitate cooperation and encourage stakeholders to collaborate	
	Assign the right job to the right staff at the right time	4

ii) Motives/Traits

The results revealed several attributes for motives/traits after thorough review and grouping of views from respective respondents (Table 10). According to 40% of respondents, individuals must demonstrate a sense of ownership for their work, office and coworkers. Conversely, another 40% also explained that one's commitment to bring required changes in himself may greatly benefit the office while 40% indicated that their staff should be ready to render services even beyond normal working hours if the need arises. Further, 30% were of the view of having employees willing to shoulder additional responsibility apart from their specified job. Based on these statements, 90% of respondents felt the importance of having dedicated or committed employees. Thus, commitment can be summarized as one of the attributes of motives/traits.

Also, 50% of the members shared that every individual must partake in development undertakings of their office to reflect their importance. Moreover, 30% were of the opinion that group discussion generates appropriate ideas to resolve emerging issues and having people willing to participate in group work is necessary. In contrast to the views above, 20% of respondents explained collective effort and collaboration with others as a suitable medium to achieve success in an organization for which cooperative staff is critical. Hence, teamwork is another important attribute.

Similarly, 40% of members expressed that as a public servant they must always refrain from misusing resources and authority associated with their position and duty. Additionally, 30% simultaneously elaborated that an organizational member should uphold regulations of the system, be accountable for the decisions they made, and 40% has the view to respect observations and comments from their subordinates. Therefore, integrity is an evident motive/trait for AMC.

Considering AMC as technical organization, 40% of respondents consistently stressed that information dissemination about new development is critical. Equally, another 40% added that farmers need awareness on purchasing quality machines to

ensure safe operation and to avert loss of resources, Furthermore, 30% emphasized the need to exchange information among respective staff in various sections and regional offices. Accordingly, communication skills may play a vital role in terms of ensuring effective and efficient service delivery of AMC.

Successively, 40% shared that every individual should perform their job and initiate new activities of their ability without having to wait for instruction. Similar views were also shared by 30% that an employee must contribute new learnings for the benefit of their office. Thus, the initiative is another favourable attribute for this study.

As discussed above, many of respondents directly or indirectly indicated the importance of commitment, teamwork, integrity, communication skills and initiative as motives/traits preferred in their staff.

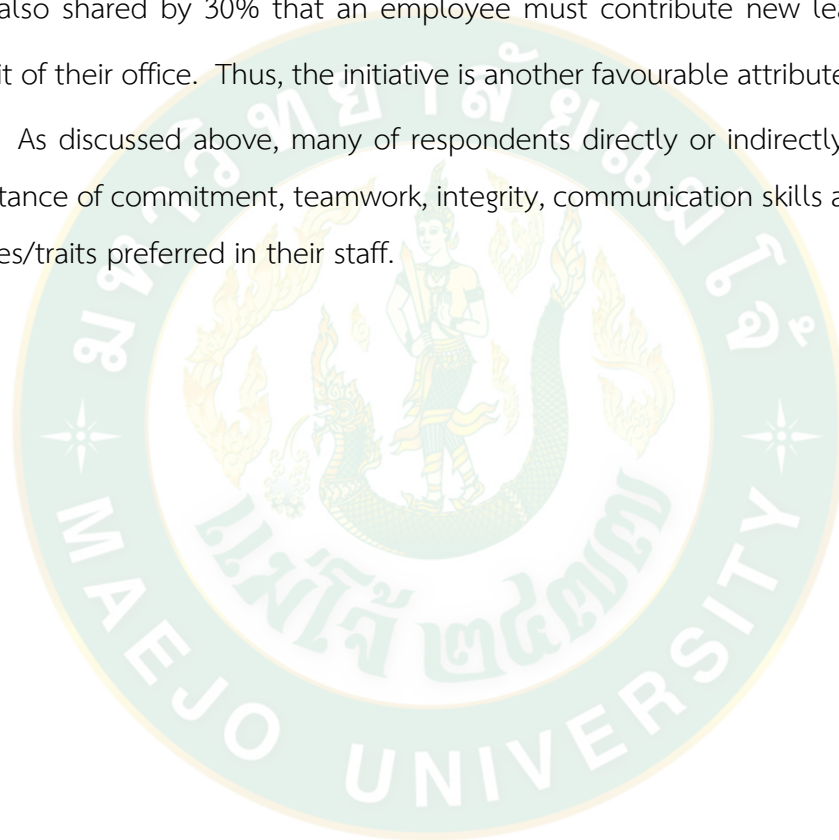


Table 10: Attributes and indicators for the motives/traits by number of respondents:

Component: Motives/Traits		
Attributes	Indicators	informants
Commitment	Be loyal to your work, office and colleagues	4
	Be committed to bringing positive change within the office environment	4
	Always be on standby to deliver 24/7 services	4
	Be punctual	3
Teamwork	Participate in developmental undertakings	5
	Exchange ideas through group discussions	3
	Collaborate with others to achieve goals	2
Integrity	Refrain from abusing resources and authority	4
	Uphold the rules and regulations as part of the system	3
	Take responsibility for the decisions that are made	3
	Be humble and listen firmly to perform better	4
Communication skill	Disseminate information to stakeholders regarding new developments	4
	Create awareness amongst farmers on the importance of quality and safety controls	3
	Learn and exchange information within the office environment	3
Initiative	Complete the task without being instructed	4
	Undertake new initiatives at your own level and capacity	4
	Contribute with ideas that would benefit your office	3

The components of individual core competency consist of leadership and motives/traits. The summary of attributes for individual core competency is identified as illustrated in (Table 11).

Table 11: Components and attributes of individual core competency:

Variable	Components	Attributes
Individual Core Competency	Leadership	Motivating and Rewarding
		Visionary thinking
		Continues improvement
		Drive for result
		Planning & Prioritizing
	Motives/Traits	Commitment
		Teamwork
		Integrity
		Communication skill
		Initiative

4.1.3. Performance

i) Organizational Performance

As reflected in (Table 12) 80% of respondents expressed that Bhutan is largely dependent on the import of farm machinery, equipment and tools that are not feasible in small landholdings. Thus, conducting research on farm mechanization is critical to introduce practical farm machinery in the country. Similarly, sourcing locally adaptable agricultural machine, equipment and tools with experimental based modifications on readily available technologies are also crucial. In contrast, 40% pointed out that AMC produced various equipment such as plough for power tiller, threshing machine, manual harvester and other prototype machines despite its limited resources and

expertise. Therefore, technology generation or research revealed as an attribute for organization performance in AMC.

The quality control was another factor for organizational performance as 80% shared that AMC creates national standards for farm mechanization in collaboration with Bhutan Standard Bureau (BSB) in line with relevant international standards. Further, they indicated how field tests are conducted for imported and locally produced machines/tools to meet the quality control measures ensuring the safety of the operators. As revealed by the 70% respondents, only those machines get certified which fulfils the minimum parameter of standards while undergoing the test based on the developed standards. Moreover, 50% shared that creating awareness among farm machinery dealers to encourage their participation in quality control process would benefit to ensure the safety and quality of farm machines in the country.

Meanwhile 100% of the respondents had an opinion that AMC conducts nationally accredited training to build capacity in operation and maintenance of agriculture machinery. 70% also explained that training course modules are based on the prescribed curriculum which was framed with technical support from the Ministry of Labour & Human Resources. Similarly, 50% shared that AMC conducted farm mechanization training to numerous government officials, corporate employees, private dealers and farmers. Therefore, we realized that training is one component of organizational performance in AMC.

Based on the findings discussed above, research, quality control and capacity buildings are identified as attributes of organizational performance in the context of this study.

Table 12: Attributes and indicators for the organizational performance by number of respondents:

Component	Attributes	Indicators	Interviewees
Organizational Performance	Research	Innovation and development for creating in-country farming technology	8
		Modification and adaptation of available technology	8
		Regeneration of past agricultural technologies	4
	Quality control	Development of standard basic requirements for imported machinery	8
		Conducting tests and certifying farm machinery	7
		Creating awareness for quality and safety control of farm machinery	5
	Training	Capacity building training to stakeholders	5
		Developing curriculum and training materials	80%
		Conducting sufficient training	50%

ii) Individual Performance

From the opinions presented several factors of individual performance were grouped as in Table 13. 40% said that organizational outputs are the result of the collective effort of the organization's staff. Therefore, their effort must be compensated in the form of financial rewards apart from normal entitlements such as pay and allowances. In addition, the system should allow every individual to grow in terms of attaining higher positions and no single employee should be deprived of being

stagnant in the same position as reported by 30%. However, another 30% expressed that the government encourages to retain the best performer and experienced staff through recognitions like awarding medals, appreciations and foreign travels. Therefore, individual growth in terms of financial remuneration, promotion and award is justifiable as an attribute for individual performance.

Further, 50% of the informants are of the view that the AMC facilitates fresh recruits to undertake a month-long attachment in a different section to familiarize themselves with various functions in the office. They also shared that the movement of experienced staff from one section to another was facilitated to help acquaint with complicated work in other sections enabling exchange of knowledge and skills. However, 30% of respondents felt the need to provide avenues to upgrade the qualification and skill of their staff through appropriate training mode. Therefore, learning was found as one component for individual performance.

Similarly, 40% shared that every single employee has a defined job description and the amount of work required to fulfil within a prescribed time. Thus, one should have a feeling of accomplishment at the end of the day. Moreover, 30% highlighted that the system requires managers to evaluate and rate the performance of their staff every year and not even a single staff raised dissatisfaction against their performance ratings awarded. In contrast, 30% of respondents shared that individuals are exposed to harsh weather conditions while in the field and raised issues such as mudslides and falling boulders as a threat while travelling in the monsoon season. However, despite the involvement of risk, their passion and interest drove them to travel and work in the field and these are the indication of deep satisfaction in performing their job. Therefore, the job satisfaction of individual was the final attribute for individual performance.

Considering the findings discussed above, growth, learning and job satisfaction are identified as attributes of individual performance for this study.

Table 13: Attributes and indicator for the individual performance by number of respondents:

Component	Attributes	Indicator	Interviewees
Individual Performance	Growth	Financial remuneration in addition to normal pay, allowances and incentives	4
		Promotion for career advancement to the next level	3
		Award and appreciation for personal achievements	3
	Learning	Induction program as an add-on to on-the-job training	5
		Creating better avenues for sharing knowledge and creating support among different sections	4
		Opportunities to upgrade knowledge and skills	3
	Job satisfaction	Satisfaction for the fulfilment of duty and responsibility	4
		No grievances for ratings awarded	3
		Passion for work despite the risks	3

The performance also comprised organizational and individual performance. The summary of attributes for performance are identified as illustrated in (Table 14).

Table 14: Components and attributes of performance:

Variable	Components	Attributes
Performance	Organizational performance	Technology generation
		Quality control
		Capacity building
	Individual performance	Growth
		Learning
		Job satisfaction

As summarized in (Table 15), the core competency of the agriculture machinery centre is formed by the organizational and individual core competency. The organizational core competency is associated with competency, capability and resources with respective attributes while individual core competency comprised leadership and motives/traits as its components. Additionally, performance was also conceived through two different levels such as organizational and individual performance. The organizational performance encompassed research, quality control and training while individual performance is represented by the growth, learning and job satisfaction.

Table 15: Summary of the qualitative result:

Key variable	Associated variable	Components	Attributes
Core Competency	Organizational Core Competency	Competency	Vision
			Mission
			Mandate
		Capability	Planning
			Execution
			Monitoring
			Evaluation
		Resources	Tangible
			Intangible
	Combined		
	Individual Core Competency	Leadership	Motivating and Rewarding
			Visionary thinking
			Continues improvement
			Drive for result
			Planning & Prioritizing
Motives/Traits		Commitment	
		Teamwork	
		Integrity	
		Communication skill	
Performance	Organizational performance	Research	Technology Generation
			Technology Release
		Quality control	Testing
			Certification
		Training	Material development
			Imparting training
	Individual performance	Growth	Career advancement
		Learning	On the job training
			Through self interest
		Job satisfaction	Self-satisfaction
			Efforts given

4.2 Quantitative Result

A survey questionnaire on 10 demographic information and 36 Likert scale question was administered to all regular staff in AMC. This section highlights the results pertaining to the descriptive and inferential statistics. The descriptive statistic summarizes the frequency, percent, arithmetic mean, standard deviation (SD), item importance and importance level while inferential part determined the study hypotheses.

4.2.1 Descriptive Statistic of the Individual and Organizational Characteristics

The study performed descriptive statistical analysis to two different categories of characteristics namely individual and organizational. Variables for the individual characteristics are gender, age, education qualification, position and experience while variables for the organizational characteristics are location of the office and type of services.

i) Individual Characteristics

The result of analysis for individual characteristics by using descriptive statistic (frequency and percentage) are presented in following sections:

a. Gender

The descriptive statistic shows a total of 62 respondents out of which 46 were male and 16 were females. The male representation at AMC was recorded at 74% while female comprised only 26% (Table 16).

Table 16: Gender of respondents:

Gender	Frequency	Percentage
Male	46	74.19
Female	16	25.81
Total	62	100

b. Age

Maximum of informants are in the age group of 36-45 which entailed 45.16% and minimum representation of 10% was observed with the age below 25 years and above 56 years. Further, age group such as 26-35 and 46-55 observed representation of 16.13% and 19.35% respectively (Table 17).

Table 17: Age of respondents:

Age	Frequency	Percentage
Less than 25 years	6	9.68
26-35 years	10	16.13
36-45 years	28	45.16
46-55 years	12	19.35
Above 55 years	6	9.68
Total	62	100

c. Education Qualification

In terms of education qualification, certificate holders represented highest number of staff in AMC which consists of 46.77% followed by 23% of officials with bachelor and master degree qualifications. Further, there are 11.29% of staff with higher secondary qualification which is slightly over than secondary and high diploma holders that comprised 9.68% each (Table 18).

Table 18: Education qualification of respondents:

Education Qualification	Frequency	Percentage
Certificate	29	46.77
Secondary	6	9.68
Higher Secondary	7	11.29
High Diploma	6	9.68
Bachelor Degree	9	14.52
Masters	5	8.06
Total	62	100

d. Position Category

Among five different position categories, supervisory and support position group had highest number of employees comprising 56.45% followed by 20.97% in operational position, 19.35% in professional and management category and 1.61% each in executive and specialist positions respectively (Table 19).

Table 19: Position category of respondents:

Position	Frequency	Percentage
Operational	13	20.97
Supervisory & Support	35	56.45
Professional & Management	12	19.35
Executive	1	1.61
Specialist	1	1.61
Total	62	100

e. Experience

One of the key variables considered was the service experience of the respondents. From the overall participants, almost 29% of respondents possesses 16-20 years of experience followed by 11-15 years with 24% and 6-10 years with almost 13%. The study also observed that newly recruited employee comprised slightly over 6% (Table 20).

Table 20: Experience of respondents:

Education Qualification	Frequency	Percentage
New recruit	4	6.45
1-2 years	1	1.61
3-5 years	3	4.84
6-10 years	8	12.90
11-15 years	15	24.19
16-20 years	18	29.03
21-25 years	0	0
26-30 years	6	9.68
Above 30 years	7	11.29
Total	62	100

ii) Organizational Characteristics

The result of analysis for organizational characteristics by using descriptive statistic (frequency and percentage) are prescribed in following sections:

a. Location of the Office

As presented in (Table 21), AMC office exists at three different locations that are Paro, Samtenling and Khangma. The majority of employees are stationed in Paro with almost 74%, followed by the Samtenling with 16% and Khangma with 10%.

Table 21: Location of the office:

Location of the Office	Frequency	Percentage
Paro	46	74.2
Samtenling	10	16.1
Khangma	6	9.7
Total	62	100

b. Type of Services

There are two different service categories such as general and technical. As illustrated in (Table 22) the representation of employee by the technical service group is 65% and 35% are in general service group.

Table 22: Type of Services

Type of services	Frequency	Percentage
General	22	35.5
Technical	40	64.5
Total	62	100

4.2.2 Descriptive Statistic of Study Variables

This study used the arithmetic mean and SD to describe the status, clarity and level of importance for the organizational core competency, individual core competency and performance. Three variables under organizational core competency, two factors each with individual core competency and performance were considered. The study used the relative level of importance as derived by Jamhour and Agha (2010);

$$\begin{aligned} \text{class interval} &= \frac{(\text{Maximum class} - \text{Minimum class})}{\text{Number of Levels}} \\ &= \frac{(5 - 1)}{3} = 1.33 \end{aligned}$$

Then, importance levels are defined as:

- Low if the mean score is from 1-2.33;
- Medium if the mean score is from 2.33-3.66; and
- High if the mean score is from 3.67 and above.

i) Organizational Core Competency

The relative importance of the organizational core competency was measured by three components such as competency, capability and resources.

a. Competency

As presented in (Table 23), the competency was measured through three units (item no. 1.1 to 1.3). The item “The mandates of AMC are clear” has the highest importance level with mean score of 4.48 and SD of 0.75 while the lowest mean score of competency was observed for the item “The mission of AMC is clear” with mean score of 4.32 and SD of 0.67 which is considerably high.

Table 23: Relative importance of competency:

Item No.	Components	Mean	SD	Item rank	Relative importance
1.	Competency				
1.1	The vision of AMC is clear	4.35	0.75	2	High
1.2	The mission of AMC is clear	4.32	0.72	3	High
1.2	The mandates of AMC are clear	4.48	0.67	1	High
Overall competency		4.39	0.58	1	High

b. Capability

The components factored for the capability were planning, monitoring, evaluation and execution of planned activities and measured items (2.1 to 2.4). As summarized in (Table 24), the highest mean score was 4.06 with SD 0.77 for the item “The planning system of AMC is clear” and the item “The evaluation system of AMC is clear” was observed with mean score of 3.84 with SD of 0.66 which is lowest for the capability part. However, the overall mean score for the capability is 3.93 and SD 0.57 which depicted with the high relative importance.

Table 24: Relative importance of capability:

Item No.	Components	Mean	SD	Item rank	Relative importance
2.	Capability				
2.1	The planning system of AMC is clear	4.06	0.77	1	High
2.2	The monitoring system of AMC is clear	3.94	0.77	2	High
2.3	The evaluation system of AMC is clear	3.84	0.66	4	High
2.4	The planned activities in AMC is executed on time	3.87	0.66	3	High
Overall capability		3.93	0.57	2	High

c. Resources

The last component of the organizational core competency has accounted tangible and intangible resources (Table 25) and these units were measured by (item no 3.1 to 3.3). Although, the resources have considerable importance, the highest mean score of 3.63 with SD 0.93 for the item “AMC has satisfactory infrastructure” which is in the medium importance level. Moreover, the overall mean score of 3.48 and SD of 0.80 for the resource component is the lowest among other study variables.

Table 25: Relative importance of resources:

Item No.	Components	Mean	SD	Item rank	Relative importance
3.	Resources				
3.1	AMC has satisfactory infrastructure	3.63	0.93	1	Medium
3.2	AMC has sound financial capital	3.32	1.05	3	Medium
3.3	AMC has required human capital	3.50	0.82	2	Medium
Overall resources		3.48	0.80	3	Medium

ii) Individual Core Competency

The relative importance of the individual core competency was measured by two components that are leadership and motives/traits.

a. Leadership

Five different key items were considered for the leadership component as measured by (item no 4.1 to 4.5). As indicated in (Table 26), the item “There is room for individuals to focus on activities that support organizational priorities in AMC” was observed with highest level of importance with mean score of 4.11 and SD of 0.60 and the lowest importance level was with the item “There is room to understand the emerging needs of the employees in AMC” with mean score of 3.69 and SD of 0.79.

Table 26: Relative importance for leadership:

Item No.	Components	Mean	SD	Item rank	Relative importance
4.	Leadership				
4.1	There is room for individuals to strive for the same organizational goal in AMC	3.98	0.67	2	High
4.2	There is room to focus on activities that support organizational priorities in AMC	4.11	0.60	1	High
4.3	There is room for recognition of individual work contribution in AMC	3.90	0.80	3	High
4.4	There is room to understand the emerging needs of the employees in AMC	3.69	0.76	5	High
4.5	There is room for feedbacks and improvement in AMC	3.89	0.75	4	High
Overall leadership		3.92	0.52	2	High

b. Motives/Traits

The key factors considered for motives/traits were measured by (item no 5.1 to 5.10). As shown in (Table 27), the relative importance of the individual core competency reveals that motives/traits of the individuals have highest relative importance with mean score 4.29 and SD 0.45 than leadership with mean score 3.92 and SD 0.52. Further, items such as “I share the knowledge, expertise and encouragement to strengthen team performance” and “I take the responsibility for the mistakes I have committed” under motives or traits were depicted as most important variables for the study with mean score 4.47, 4.40 and SD 0.72 and 0.66 respectively.

Table 27: Relative importance for motives/traits:

Item No.	Components	Mean	SD	Item rank	Relative importance
5.	Motives/Traits				
5.1	I take the opportunity to do new things for the betterment of AMC	4.13	0.74	9	High
5.2	I take additional responsibilities without being asked	4.13	0.66	8	High
5.3	I consider my job and duty in AMC above other business	4.13	0.80	10	High
5.4	I am actively participating in development undertakings in AMC	4.34	0.63	4	High
5.5	I adhere to the terms of reference of my job while performing my duty	4.34	0.68	5	High
5.6	I take the responsibility for the mistakes I have committed	4.40	0.66	2	High
5.7	I believe in collaboration and cooperation for organizational success	4.35	0.68	3	High
5.8	I share the knowledge, expertise and encouragement to strengthen team performance	4.47	0.72	1	High
5.9	I have no issues in communicating with others	4.32	0.72	6	High
5.10	I use the appropriate language to the audience for official communication	4.24	0.67	7	High
Overall motives/traits		4.29	0.45	1	High

iii) Performance

The relative importance of the performance are measured by two components such as organizational performance and individual performance. Similar analysis approach was pursued as in the previous sections

a. Organizational Performance

For organizational performance, key items considered are measured by (item no. 6.1 to 6.6). As presented in (Table 28), the highest mean score for organizational performance was for item “AMC conducted required trainings so far” with mean score 4.28 and SD 0.78 whereas item “AMC released required technology so far” had the lowest mean of 3.81 and SD of 0.83.

Table 28: Relative importance of organizational performance:

Item No.	Components	Mean	SD	Item rank	Relative importance
6.	Organizational Performance	3.95	0.63	2	High
6.1	AMC generated required technology so far	3.85	0.76	5	High
6.2	AMC released required technology so far	3.81	0.83	6	High
6.3	AMC developed required standards so far	3.98	0.74	2	High
6.4	AMC certified required technologies so far	3.89	0.79	4	High
6.5	AMC developed required training materials so far	3.92	0.75	3	High
6.6	AMC conducted required trainings so far	4.26	0.79	1	High
Overall organizational performance		3.95	0.63	2	High

b. Individual Performance

For individual performance, key items factored are measured by (item no. 7.1 to 7.5). As illustrated in (Table 29), the high level of importance with mean score 4.23 and SD 0.71 was observed for the individual performance compared to organizational performance with mean score 3.95 and SD 0.63. For individual performance, the highest mean score was 4.26 and SD 0.79 with the item “I feel I have shouldered the responsibilities in the best of my ability”. Further, the study found two other important factors like learning and job satisfaction with appropriate importance level.

Table 29: Relative importance of individual performance:

Item No.	Components	Mean	SD	Item rank	Relative importance
7.	Individual Performance	4.22	0.51	1	High
7.1	My career advanced as expected until now	3.73	0.75	5	High
7.2	I get to learn new things and ideas while doing my job	4.31	0.69	3	High
7.3	I am keen to learn and acquire new knowledge and skills to meet changing requirements for my job	4.34	0.75	2	High
7.5	I am satisfied with my job performance so far	4.23	0.66	4	High
7.6	I feel I have shouldered the responsibilities in the best of my ability	4.53	0.69	1	High
Overall individual performance		4.22	0.51	1	High

4.2.3 Correlation of Study Variables

i) Correlation of Organizational Core Competency

As shown (Table 30), a strong and significant correlations existed among variables under respective components of the organizational core competency. For example, the correlation coefficient between competency and organizational core competency is highly correlated with about 0.75, between capability and organizational core competency is about 0.90 and that of resources and organizational core competency which is about 0.83.

Table 30: Correlation of organizational core competency:

Components	Correlation coefficient (r)	t-value	p-value
Competency	0.7526	9.0561	0.0000***
Capability	0.8976	-0.1507	0.0000***
Resources	0.8280	-7.6247	0.0000***
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>			

ii) Correlation of Individual Core Competency

Similarly, upon examining the individual core competency and its components, a strong and significant correlation were observed (Table 31). A positive and a very strong correlation exists between individual core competency and leadership (almost 0.93) and with motives/traits (almost 0.84), all significant at 5% level.

Table 31: Correlation of individual core competency:

Components	Correlation coefficient (r)	t-value	p-value
Leadership	0.9282	-5.2539	0.0000***
Motives/traits	0.8366	5.2539	0.0000***
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>			

iii) Correlation of Performance

The overall performance is the combination of organizational and individual performance. It is evident that the correlation observed to the performance was significant at 5% level (Table 32). The organizational performance is associated strongly with the overall performance with 0.98 compared to individual performance with 0.84.

Table 32: Correlation of performance:

Performance	Correlation coefficient (r)	t-value	p-value
Organizational	0.9282*	-4.0241	0.0000***
Individual	0.8366*	4.0241	0.0000***
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>			

4.2.4 Hypothesis Test Results

i) Testing of Hypothesis 1

H₁: The organizational characteristics influence the organizational core competency.

For hypothesis one, the study pursued variables such as location of the office and type of service as organizational characteristics while competency, capability and resources of the organization were considered as organizational core competency.

ii) Correlation Matrix for Hypothesis 1

The organizational characteristics showed no strong or a little correlation with the organizational core competency (Table 33). The organizational core competency does not matter in terms of location of the office. However, if we consider the type of service whether or not it is general or technical in nature, it does matter in terms of competency and this was found to be significant at 5% level.

Table 33: Correlation Matrix of Hypothesis 1:

Characteristics	Components	Correlation coefficient (r)	f-value	p-value
Location of the office	Competency	0.1210	0.57	0.3490
	Capability	0.1027	1.27	0.4269
	Resources	-0.0727	0.50	0.5744
Type of service	Competency	0.3606	3.91	0.0040***
	Capability	0.0834	1.32	0.5191
	Resources	0.0845	0.62	0.5136

Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level

a) **Influence of organizational characteristics (location of the office) on organizational core competency**

To deeper analyze the influence of organizational characteristics on organizational core competency, a separate study was conducted. In the first, the study pursued whether or not the location of the office has influence on organizational core competency (Table 34). It was observed that there is no enough evidence to say that organizational core competency components differ by location. None of the variables were found to be significant.

Table 34: Result of the influence of organizational characteristics (location) on organizational core competency:

Organizational characteristics	Organizational core competency	N	Mean	S.D	F-stat	Sig.
Location 1. Paro 2. Samtenling 3. Khangma	Competency	62	4.3871	.5827	0.51	0.6049
	Capability	62	3.9274	.5715	0.76	0.4741
	Resources	62	3.4839	0.7954	0.59	0.5582

b) Influence of organizational characteristics (type of service) on organizational core competency

Similar approach was pursued to see if the type of service has influence on the organizational core competency (Table 35). As evident, the only variable that was found significant was the type of service for competency indicating that organizational core competency differs by the type of service. However, as for the capability and resources, both the variables were found to be insignificant. This indicated that there is no substantial evidence to say that organizational core competency components such as capability and resources differ by the type of service.

Table 35: Result of the influence of organizational characteristics (type of services) on organizational core competency:

Organizational characteristics	Organizational core competency	Observation	Mean	S.D	F-stat	Sig
Type of services	Competency	62	4.3871	.5827	8.97	0.0040**
1. General	Capability	62	3.9274	.5715	0.42	0.5191
2. Technical	Resources	62	3.4839	0.7954	0.43	0.5136
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>						

iii) Testing of Hypothesis 2

H₂: The individual characteristics influence the individual core competency.

For hypothesis two, the study tested variables such as gender, age position, qualification and experience as individual characteristics while leadership and motives of the staff as individual core competency.

iv) Correlation Matrix for Hypothesis 2

The correlation matrix for individual characteristics and individual core competency indicates no correlation (Table 36). All of the variables considered for individual characteristics were observed to be insignificant at 5% level. To understand it deeper, t-test was conducted for individual characteristics like gender while ANOVA test was employed for rest of the individual characteristics.

Table 36: Correlation matrix for individual core competency (H2):

Characteristics	Components	Correlation co-efficient (r)	t-value	p-value
Gender	Leadership	-0.1336	0.9820	0.3004
	Motives/Traits	-0.0471	0.3724	0.7160
Age	Leadership	0.2183	0.8500	0.0882
	Motives/Traits	-0.0537	0.5200	0.6782
Position	Leadership	0.1265	1.0600	0.3273
	Motives/Traits	0.1890	0.6800	0.1413
Qualification	Leadership	-0.1106	0.7100	0.3920
	Motives/Traits	0.1651	0.7200	0.1998
Experience	Leadership	0.2115	0.9600	0.0989
	Motives/Traits	-0.1017	0.6300	0.4314

a) Results of the t-test to define the influence of individual characteristics (gender) on individual core competency

The result of the tests for the influence of individual characteristics such as gender in this case on individual core competency was observed to be insignificant (Table 37). This indicated that there is no adequate evidence to say that individual core competency such as leadership and motives/traits differ by gender.

Table 37: Result of the influence of gender on individual core competency:

Individual Characteristic	Individual core competency	N	Mean	SD	t-stat	Sig.
Male	Leadership	46	3.96	0.50	0.9820	0.3361
Female		16	3.80	0.57		
Total		62	3.92	0.52		
Male	Motives	46	4.30	0.45	0.3724	0.7125
Female		16	4.25	0.44		
Total		62	4.29	0.45		

b) Results of ANOVA test for age to influence individual core competency

The age was also found to be not significant in terms of influencing individual core competency (Table 38). This is the evidence that individual core competency component does not differ by the factor of age in AMC.

Table 38: Result of the influence of individual characteristics (age) on individual core competency:

Individual characteristics	Individual core competency	N	Mean	S.D	F-stat	Sig
Age	Leadership	62	3.9161	.5167	0.85	0.5831
	Motives	62	4.2855	.4475	0.52	0.9302

c) Results of ANOVA test for position to influence individual core competency

The position of the individual was also not significant (Table 39). Thus, no enough evidence was found to say that the individual core competency differ by the position.

Table 39: Result of the influence of individual characteristics (position) on individual core competency:

Individual characteristics	Individual core competency	N	Mean	S.D	F-stat	Sig
Position	Leadership	62	3.9161	.5167	1.06	0.4080
	Motives	62	4.2855	.4475	0.68	0.8046

d) **Results of ANOVA test for qualification to influence individual core competency**

The qualification factor has also not shown enough evidence to prove that it influences the individual core competency (Table 40). The leadership and motives do not necessarily differ in terms of individual qualification.

Table 40: Result of the influence of individual characteristics (qualification) on individual core competency:

Individual characteristics	Individual core competency	N	Mean	S.D	F-stat	Sig
Qualification	Leadership	62	3.9161	.5167	0.71	0.7082
	Motives	62	4.2855	.4475	0.72	0.7691

e) **Results of ANOVA test for experience to individual core competency**

The individual experience was also observed to be insignificant. There is no enough significance level present to say that individual working experience influences leadership and motives (Table 41) as individual core competency.

Table 41: Result of the influence of individual characteristics (experience) on individual core competency:

Individual characteristics	Individual core competency	N	Mean	S.D	F-stat	Sig
Experience	Leadership	62	3.9161	.5167	0.96	0.4926
	Motives	62	4.2855	.4475	0.63	0.8464

v) Testing of Hypothesis 3

H₃: Core competency (both organizational and individual) effect the performance.

For hypothesis three, organizational and individual performance was factored as dependent variable for the organizational core competency and individual core competency respectively. In addition, the combination of organizational and individual core competency was pursued as core competency (independent variable) with performance (dependent variable) which factored research, quality control and training as components for the organizational performance and growth, learning and job satisfaction as components for the individual performance.

vi) Correlation Matrix for Core Competency and Research

The correlation matrix for core competency such as competency, capability, resources, leadership and motives to research indicate fair correlation. Here, research component was considered as the performance. The study found only two core competency variables in particular the capability and resources were significant at 5% level (Table 42).

Table 42: Correlation Matrix for core competency and performance (research)

Performance	Core competency	Correlation coefficient (r)	f-value	p-value
Research	Competency	0.2177	0.89	0.0892
	Capability	0.3674	1.93	0.0033***
	Resources	0.2990	1.71	0.0182**
	Leadership	0.1036	1.11	0.4228
	Motives/Traits	0.2694	0.63	0.0342
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>				

vii) Correlation Matrix for Core Competency and Quality Control

Similarly, quality control was employed as performance to the core competencies. As evident in the correlation matrix (Table 43), almost all were observed significant except the leadership component. Thus, there is enough evidence to say that quality control does influence the core competency.

Table 43: Correlation Matrix for core competency and performance (quality control)

Performance	Core competency	Correlation coefficient (r)	f-value	p-value
Quality Control	Competency	0.3784	2.14	0.002***
	Capability	0.4630	3.69	0.0002***
	Resources	0.3513	1.92	0.0051***
	Leadership	0.2487	1.91	0.0513
	Motives/Traits	0.4098	1.04	0.0009***
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>				

viii) Correlation Matrix for Core Competency and Training

The correlation matrix for core competency and training indicates a positive correlation (Table 44). None of the variables were insignificant. Thus, there is a strong evidence that training influences core competency.

Table 44: Correlation matrix for core competency and performance (training)

Performance	Core competency	Correlation coefficient (r)	f-value	p-value
Training	Competency	0.4318	3.86	0.0005***
	Capability	0.5232	3.52	0.0000***
	Resources	0.4454	2.82	0.0003***
	Leadership	0.5111	4.14	0.0000***
	Motives/Traits	0.5351	2.47	0.0000***
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>				

ix) Correlation Matrix for Core Competency and Growth

The correlation matrix for core competency and growth indicates fair correlation (Table 45). The performance (here growth) influences leadership and motives, and these were found to be significant at 5% level. However, there is no strong evidence to say that growth influences organizational core competency components.

Table 45: Correlation Matrix for core competency and performance (growth)

Performance	Core competency	Correlation co-efficient (r)	f-value	p-value
Growth	Competency	0.1843	0.90	0.1517
	Capability	0.0866	0.61	0.5031
	Resources	0.1619	0.88	0.2088
	Leadership	0.2949	0.92	0.0200**
	Motives/Traits	0.4029	1.96	0.0012***
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>				

x) **Correlation Matrix for Core Competency and Learning**

The correlation matrix for core competency and training indicates a strong evidence to say that learning influences core competency (Table 46). The only insignificant variable was the component of competency under organizational core competency. Thus, there is a strong evidence that core competency differs by learning.

Table 46: Correlation matrix for core competency and performance (learning)

Performance	Core competency	Correlation co-efficient (r)	f-value	t-value
Learning	Competency	0.2923	2.88	0.0211
	Capability	0.4669	2.86	0.0001***
	Resources	0.4437	2.28	0.0003***
	Leadership	0.4790	3.98	0.0001***
	Motives/Traits	0.6086	3.11	0.0000***
<i>Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level</i>				

xi) **Correlation Matrix for Core Competency and Job Satisfaction**

The correlation matrix for core competency and job satisfaction indicates a strong correlation (Table 47). Almost all of the variables considered for the core competency were significant at 5% level. Job satisfaction influences core competency and there is was a strong evidence.

Table 47: Correlation Matrix for core competency and performance (job satisfaction)

Performance	Core competency	Correlation co-efficient (r)	f-value	t-value
Job satisfaction	Competency	0.2657	1.12	0.0369**
	Capability	0.3880	2.57	0.0018***
	Resources	0.4987	2.38	0.0000***
	Leadership	0.3944	2.91	0.0015***
	Motives/Traits	0.5649	2.89	0.0000***

Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level

xii) To further test the third hypothesis, the study employed linear regression. The basic model estimated was:

$$P_r = \alpha + \beta OC'_r + \epsilon_r \quad (\text{Basic model})$$

Where \mathbf{p} is performance of respondent \mathbf{r} like research, quality control, training, growth, learning and job satisfaction; \mathbf{OC}' is a vector of organizational competency like competency, capability and resources; and $\boldsymbol{\epsilon}$ is an error term. To further incorporate individual competency, the following extension model was employed:

$$P_r = \alpha + \gamma IC'_r + \varepsilon_r \quad (\text{Extended model})$$

Where p is performance of respondent r like research, quality control, training, growth, learning and job satisfaction; IC' is the vector of individual competency like leadership, motives/traits; and ε is an error term.

a) The effect of organizational core competency on organizational performance (research)

Research influences organizational core competency in positive direction and it was found to be significant at 5% level (Table 48). A unit change in research is estimated to bring almost 50% change in the organizational core competency, keeping all other factors constant.

Table 48: Results of the effect of organizational core competency on performance: (research)

Independent Variable	Research		t-value	p-value
	Co-efficient	S.E		
Organizational core competency	.5018	.1793	2.80	0.007***
Constant	1.8575	0.7126	2.61	0.012

*Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level*

b) The effect of organizational core competency on organizational performance (quality control)

The quality control on the other hand was also found significant at 5% level (Table 49). This effect is observed to influence organizational core competency in the

positive direction with almost 64% change with a unit change in quality control, considering there is no change in the other factors.

Table 49: Results of the effect of organizational core competency on performance: (quality control)

Independent Variable	Quality Control		t-value	p-value
	Co-efficient	S.E		
Organizational core competency	.6362	.1393	4.57	0.000***
Constant	1.434	0.556	2.58	0.000***

*Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level*

c) The effect of organizational core competency on organizational performance (training)

The effect of organizational core competency on training component of the performance entered significant at 5% level (Table 50). This effect is observed to influence organizational core competency in the positive direction and a change of a unit in the training component will gradually effect an influencing component of the organizational core competency.

Table 50: Results of the effect of organizational core competency on performance: (training)

Independent Variable	Training		t-value	p-value
	Co-efficient	S.E		
Organizational core competency	.7248	.1229	2.44	0.018***
Constant	1.2387	0.1229	5.90	0.000***

Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level

d) **The effect of organizational core competency on organizational performance**

As presented in (Table 51), the organizational core competency derived with three different components positively effects the organizational performance conceived in the form of research, quality control and training at 5% level. Thus, the components of the organizational performance are subject to fluctuate depending on the changes happening with the components of the organizational core competency.

Table 51: Results of the effect of organizational core competency on organizational performance

Independent Variable	Organizational Performance		t-value	p-value
	Co-efficient	S.E		
Organizational core competency	.7576	.1614	6.71	0.000***
Constant	.7576	.0398	19.02	0.000***

Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level

e) **The effect of individual core competency on individual performance (growth)**

As expected, the individual core competency factored with leadership and motives/traits was found significant to effect the growth component of the individual performance at 5% (Table 52). It is evident that any variation with elements of the individual core competency shall lead to changes in the growth of individuals in AMC.

Table 52: Results of the effect of individual core competency on individual performance: (growth)

Independent Variable	Growth		t-value	p-value
	Co-efficient	S.E		
Individual core competency	.8377	.0691	12.13	0.000***
Constant	.5362	.3015	1.78	0.000***

*Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level*

f) **The effect of individual core competency on individual performance (learning)**

The learning component of the individual performance observed the significant effect of individual core competency at 5% level (Table 53). This indicates a positive influence on individual core competency.

Table 53: Results of the effect of individual core competency on individual performance (learning)

Independent Variable	Learning		t-value	p-value
	Co-efficient	S.E		
Individual core competency	1.0850	.1569	6.92	0.000***
Constant	-0.1935	.6569	-0.30	0.000***

Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level

g) The effect of individual core competency on individual performance (job satisfaction)

As reflected in (Table 54), there was a significant evidence at 5% on the effect of individual core competency on job satisfaction. The job satisfaction directly or indirectly differs by components of the individual core competency.

Table 54: Results of the effect of individual core competency on individual performance: (job satisfaction)

Independent Variable	Job satisfaction		t-value	p-value
	Co-efficient	S.E		
Individual core competency	.9574	.1566	6.12	0.000***
Constant	.3939	.6688	0.59	0.558

Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level

h) The effect of individual core competency on individual performance

A significant evidence was observed with the effect of individual core competency and individual performance which entered at 5% level (Table 55). This result shows that all individual performance have significant effect of individual core competency. Hence, deviation of the factors related to leadership and motives/traits may negatively or positively effect the individual performance defined in terms of growth, learning and job satisfaction.

Table 55: Results of the effect of individual core competency on individual performance:

Independent Variable	Individual Performance		t-value	p-value
	Co-efficient	S.E		
Individual core competency	.8708	.1100	7.91	0.000***
Constant	.4516	.4427	1.02	0.312

*Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level*

i) The effect of core competency (overall) on performance (overall)

The core competency derived as combination of organizational and individual core competency also entered significantly at 5% (Table 56) for its effects to the performance factored with all components of the organizational and individual performance. Therefore, it was found that an element under various component of performance shall observe variations as the result of a change in the unit of a component under the core competency.

Table 56: Results of the effect of core competency (overall) on performance:
(overall)

Independent Variable	Performance (overall)		t-value	p-value
	Co-efficient	S.E		
Core competency (overall)	.9071	.1112	8.15	0.000***
Constant	.3841	.4397	0.87	0.386

Note: ***, **, and * represents significance level at 0.01; 0.05; 0.1 level



Chapter Five

Conclusion, Discussion and Recommendation

5. Introduction

This chapter firstly presents the conclusion followed by the discussion and recommendations. The conclusion highlights the brief theoretical and practical process with key findings whereas discussion part presents the comparison of the study findings. These are further complimented by recommendations for the practical way forward and the future study. Findings of the study contributed to answer questions formulated in chapters one and two and realized all the objectives.

5.1 Conclusion

AMC despite confronting numerous challenge plays a critical role in achieving farm mechanization needs in Bhutan. The fact of demand for the major attention to alleviate drudgery in the Bhutanese farm (AMC, 2018) encouraged to examine the internal institutional capacity of AMC. Christensen et al. (2007) suggested that a public and private organization differs in many areas which includes organizational structure, process, resources, function, autonomy, administration and leadership. Mulder (2017) also revealed that Max Weber's Bureaucratic theory featured five principles such as task specialization, hierarchical of authority, formal selection, rules and requirements, impersonal and career orientation that are believed to benefit organizations to become structured and function effectively. Therefore, core competency existed in the form of organizational and individual levels (Campion et al., 2011; Soderquist & Papalexandris, 2010) were pursued as a tool for this study. The study adopted exploratory sequential mixed-method approach (Creswell, 2013) to identify and determine the organizational and individual core competency with influencing characteristics and effects of the core competency to performance.

The core competency of AMC was conceived in the form of organizational and individual core competency and performance was manifested in two dimensions such as organizational and individual performance. The organizational core competency is associated with components like competency, capability and resources while individual core competency was represented by the leadership and motives/traits. Similarly, the components of organizational performance consists of research, quality control and training while individual performance comprised growth, learning and job satisfaction. Thus, these findings contributed to meet the first objective which was 'To identify the organizational and individual core competency of the Agriculture Machinery Centre'.

In terms of the importance level, from the components of organizational core competency, the competency bears the highest importance level with mean score 4.39 whereas capability and resources were observed with the mean score of 3.93 and 3.48 respectively. As for components of the individual core competency, leadership has the mean score of 3.92 and motives/traits obtained 4.29. Moreover, organizational performance stands with mean score of 3.95 and individual performance acquired the mean score of 4.22. Although it has considerable score, the lowest importance level among the study variables was witnessed with the resources component.

As hypothesized, the organizational characteristics (type of service) was found to be significant for its influence on competency under the components of the organizational core competency. However, no adequate evidence was observed with location of the office. Similarly, no substantial evidence was found with the influence of individual characteristics on individual core competency. Nevertheless, the components of organizational and individual core competency entered significant for their effect to organizational and individual performance respectively. Moreover, all components of the organizational and individual core competency was significant for

its effect to overall performance. Therefore, this finding contributed to fulfil the second objective “To study the effect of core competency to performance”.

With regard to the status of organizational characteristics, the regional offices of AMC located in *Samtenling* and *Khangma* comprised limited staff. As for individual characteristics, composition of male employee are higher than females. Furthermore, considerable number of staff are in the age group of 36-45 while substantial number of staff possesses only certificate level qualification. Further, maximum staff are in the supervisory and support position group. Thus, based on the result of the study and status the characteristics, a practical guideline in the form of a year plan was developed which achieved the third and final objective of the study which is “To develop a guideline to strengthen the organizational capabilities of the Agriculture Machinery Centre”.

5.2 Discussion

A competency which is a construct can only be measured through the indirect means of observing or measuring its behaviors (Lahti, 1999). In line with the work of (Agha et al., 2012; Natalia CybisAnna K. Baczyńsk et al., 2016), the attributes of competency differed organization as the competency has been recognized through its vision, mission and mandates as in the case of AMC. In other words, a competency is cross-functional integration which coordinates an organization’s capabilities (Javidan, 1998). Competency, the first component of the organizational core competency measured with three different items obtained the highest importance level which indicated that members of AMC commonly agree to the clarity of their vision, mission and mandates.

The capability of AMC vested with organizational functions like planning, execution, monitoring and evaluation. CLARDY (2007) expressed that any function related to organizational production is organizational capability. Uysal (2007) argued

that capability is a set of organizational processes and operational practice that develop unique product with quality and it should have priority in establishing core competency. It was examined with four items and had high importance level with. This shows that most of the staff in AMC are aware and involved in planning, execution, monitoring and evaluation process. Nevertheless, comparing to competency, it is evident that some of the staff are either not fully aware or involved in the entire planning process of AMC.

Resources are manifested in three forms that are tangible, intangible and combination of both. The properties owned by a firm in the form of equipment or building is tangible assets and (CLARDY, 2007; Hafeez & Essmail, 2007) and employees can be considered as most important intangible asset in an organization (Natalia CybisAnna K. Baczyński et al., 2016). Human resource is considered as the tool to exploit other resources meaningfully to fulfil the organizational goal (Asad-ur-Rehman et al., 2015; Pujiwati & Susanty, 2015). The combination resource was referred to the assistance provided in the form of a grant and human resource expertise by the donor partners. Resources, factored as the third component assessed with three items was observed with the lowest importance level. It is apparent that resources either tangible or intangible are not adequate for the level of mandates endowed to AMC.

Leadership was recognized through five prominent factors, such as motivation and reward, creative thinking, continuous improvement, result-driven approach, planning and prioritizing. These leadership characteristics are consistent with the work of (Campion 2011) and the recommendations of (Graber, 2012). It was examined through five units and observed in second lowest importance level among the study variables. Therefore it is evident that the maximum number of staff agreed with the leadership factors measured for this study. However, there are still some staff not fully aware or agree with the elements covered in this study.

The motives/traits comprised components like commitment, teamwork, integrity, communication skills and initiative as suggested by (Graber, 2012). Having these factors consistent and intact among organizational members would lead to better atmosphere and improved job performance in organizations (Chen & Chang, 2011; Cripe, 2002; Yang et al., 2006). These were evaluated through 10 different items and secured the second highest importance in this study. Thus, it is clear that individuals in AMC bears the considerable aptitude defined as attributes of motives/traits in the context of this study.

The organizational performance comprises outputs of research, quality control and training activity which is organization specific related to farm mechanization in Bhutan. Surveyed with six items, this component has a high importance. Nonetheless, development of training materials for training, certification efforts of the quality control and research activities like generation and releasing of technology observed with leased importance.

The individual performance involves growth, learning and job satisfaction at a personal level, which is evident with the work of (HEIJDE & HEIJDEN, 2006). Thus, it was observed that higher the management's consideration to improve individual performance, better the achievements of organization's outputs. The individual level of performance assessed through five items obtained substantial importance. Although, individuals in AMC are not grieved of learning and job satisfaction, the career growth of staff encountered limitations.

In accordance with the findings of (Potasin & Thechatakerng, 2014), we hypothesized type of service and location of the office as influencing organizational characteristics to organizational core competency. Consequently, the type of service has significant influence competency of organizational core competency. However, no substantial evidence was observed with location of the office which is an indication that organizational core competency does not differ by location. The individual

characteristics like gender, age, position, qualification and experience were hypothesized as influencing characteristics to individual core competency. Surprisingly, none of the factor was significant as assumed for this study. Therefore, it is evident that all personnel in AMC have same view in terms of individual characteristics on individual core competency. However, we realized that the size of the sample plays an important role in determining the influencing individual characteristics as previous scholars (Asad-ur-Rehman et al., 2015; Hussain & Hassan, 2016; Sricham & Thechatakerng, 2017), employed over 400 informants whereas the current study comprised only 62.

Finally, as expected, the effect of organizational core competency on organizational performance is consistent with the findings of (Agha et al., 2012) while effect of individual performance on individual performance agrees to the recommendation of (Chen & Chang, 2011). Besides this, factored from organizational and individual core competency, the core competency of AMC significantly effects the performance derived from organizational and individual performance.

5.3 Recommendation

The recommendation of the study are outlined as academic and practical since the current study encompassed two major approaches such as theoretical and practical.

5.3.1 Academic recommendation

This study contributed to apply the core competency to a government organization through a mixed-method approach while assessing the effect of core competency on performance. Although the study best attempted to assess the internal institutional capacity of AMC in delivering the farm mechanization needs in Bhutan, the generalizability of findings is minimum due to the nature of small sample size involved in the study. Similarly, limitations like relation between core competency

dimensions and external influencing factors are inherent. Therefore, a compatible study recommended in the future would be to examine the external conflicting or attributing causes of the core competency and farm mechanization in Bhutan.

5.3.2 Practical recommendation

Based on the importance level as per the mean score, frequency and ratio of the organizational and individual characteristics, significance or insignificance of the hypotheses tests and consistent effect of core competency on performance, the management of AMC may consider the following recommendations:

1. The competency of AMC not just bears the highest importance level but also effects organizational performance. Thus, the management of AMC may nurture, enhance and communicate the vision, mission and mandates to relevant stakeholders on regular intervals to yield higher impact.
2. The capability of AMC also effects organizational performance but observed with least importance than competency. AMC may consider specific amount of work for a particular plan period, brief stakeholders about objectives and involve them in the planning process for satisfactory implementation of activities.
3. Although effects organizational performance, resources component observed with lowest importance in this study. Consider developing strategy to increase composition of qualified and skilled human resource as per the mandates and mobilize and allocate required resources for the amount of work to be achieved in a specific plan period.
4. Leadership, a component of individual core competency observed second lowest though it effects individual performance. Conduct workshop within office, educate staff about different leadership roles of individuals, managers or executives to maximize the level of awareness and improve leadership qualities of individuals,

5. Motives/Traits of the individual core competency has second highest importance among the study variables which also effects individual performance. Introducing a system to reward similar quality among the staff may benefit to encourage and maintain continuity of such good aptitude of the staff.
6. As for organizational performance, research activities like generation and release of technology, certification and development of training materials requires attention. Hence, consider the following:
 - a. Follow specific research method and approach for the activities related to generation and release of technology to ensure next level of advancement.
 - b. Create awareness to convince suppliers and consumers of farm machinery to ensure safety and quality of imported or in-country generated products.
 - c. Develop specific course module and training materials based on the demand of skill in the job market and requirement of the farmers.
7. The individual performance which had third importance level observed the limitation of growth in terms of career advancement among the staff. Therefore, exploring and creating an avenue for stagnated staff to pursue further career path may contribute to retain technically experienced staff. Also, there is a need to create a room for sharing individual experience and knowledge across sections and regionals for enhanced learning.
8. The type of service (general or technical) influences organizational core competency. Therefore, maintaining minimum of 70% technical and 30% general staff may yield better organizational performance.
9. Staff strength in regional centres are comparatively low than headquarter. Consider increasing number of staff and activity in the regional offices according to the size and population of districts under respective regions.

10. Frequency of male employee is higher than females. Based on the nature of service being catered to farmers which are mostly composed of more females, increasing female employees may help reduce the risk of failing in the future.
11. Maximum number of staff are in age group of 36-45 with qualification of certificate level and mostly in supervisory and support group. Therefore, increase frequency of staff aged 25-35 for better succession planning, provide opportunity to enhance higher qualifications and consider equal staff ratio in all position groups except executive/specialist category.

AMC as a government organization, implementation of these recommendations would require to follow many different stages. Some recommendations can be directly executed by the AMC while some components requires consideration and approval of the relevant higher authorities. Therefore, a practical guideline is illustrated to consider while implementing recommendations as illustrated (Table 57) in the form of a year plan in keeping with the existing government norms, policies, and processes.

The timeline mainly illustrates the actions to be executed by the AMC to enhance its core competency either independently or in collaboration with the relevant stakeholders. Several actions such as information dissemination within or across the office, consideration of proper research methodology, development of training materials, increasing frequency of staff and activity in the regionals, providing qualification enhancement opportunity and consideration of equal ratio of staff in all position categories except executive/specialist are to be given attention throughout the year. In addition, strategy development for various activity, allocation of resources and recruitment and selections are recommended to follow specific months to capitalize the potential scope of achievement both within and outside the AMC. Finally, the timing for in-house workshop, training and consultations are recommended based on the possibility of involving maximum staff.

Table 57: Year plan for recommendations:

Year plan for recommendations															
SL #	Activity	Months to follow as per the planning period												Action	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	Nurture, enhance and communicate the vision, mission and mandates.													AMC	
2	Brief stakeholders about specific plan objectives and involve them.														AMC
3	Develop strategy to increase composition of qualified and skilled human resource.														AMC
4	Allocate required resources for the amount of work to be achieved in a specific plan period.													With others	
5	Conduct leadership workshop.														AMC
6	Introduce system to reward and encourage motives/traits.														With others
7	Follow specific research method and approach.													AMC	
8	Create awareness to convince suppliers and consumers.													With others	
9	Develop specific course module and training materials.													With others	
10	Create avenue for stagnated staff to pursue further career path.														With others
11	Increase number of staff and activity in the regionals.													With others	
12	Increasing number of female employees.													AMC	
13	Increase frequency of staff aged 25-35.														AMC
14	Provide opportunity to enhance higher qualifications.													With others	
15	Consider equal staff ratio in all positions except executive/specialist category.													With others	

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APENDICES

Appendix I - Interview Questions

a. Questions related to organizational core competency:

1. The Agriculture Machinery Centre was established in the early 1960s but still struggles to fulfill the farm mechanization needs in the country. Many external as well as internal factors may have contributed to the inefficiencies in AMC. Describe some internal factors that you think may be affecting AMC's success?
2. The success of an organization may be attributed to good operational practices. There may be number of management systems in place within AMC. Describe some of the key areas of operational practices that you have currently adopted to accomplish the tasks?
3. Resources are key to the organization's value chain and it is commonly categorized in terms of tangible and intangible forms. Describe the tangible and intangible resources of AMC?

b. Questions related to individual core competency:

4. A good leadership is an important trait in any organization. Describe the leadership qualities possessed by AMC or the elements of leadership that currently drives AMC?
5. Positive energy of staffs are often considered as crucial part for individual and also organizational successes. Describe the motives/traits that you wish the AMC staff should possess or the system may require?

c. **Questions related to performance:**

6. AMC has several components of organizational performance. Describe the main areas of organizational performance in AMC?
7. There must be considerable factors of individual performance in AMC. Describe some key areas that best depicts individual performance in AMC?
8. Any other comments or suggestions related to organizational and individual's core competency of AMC?



Appendix II – Survey Questionnaire

Dear Respondent,

I am Penjor currently pursuing master degree program in Business Administration (MBA) at the Maejo University, Chiang Mai, Thailand under the guidance of Dr. Pusanisa Thechatakering, Asst. Professor and Chairperson for MBA program. The topic of my study is “Enhancing the Core Competency of the Agriculture Machinery Centre”.

Based on the careful review of policy documents, reports, theories and many other relevant papers, a “Survey Questionnaire” is designed containing four sections with 46 questions to gather information about respondents and study variables such as organizational core competency (OCC), individual core competency (ICC), and performance concerning the Agriculture Machinery Centre.

Therefore, it would be of immense help if you can answer all questions accurately. The information obtained through this survey will be used only for the academic purpose and treated with utmost confidentiality.

Thank you in advance for your time and kind cooperation.

Yours sincerely,

Penjor

Maejo University

Email: paroppenjor@gmail.com

Survey Questionnaire

Please tick the appropriate answers

1. Gender:

1. Male 2. Female

2. Age:

1. Less than 25 2. Between 26-35 3. Between 36-45 4. Between 46-55
5. Above 55

3. Marital Status:

1. Single 2. Married 3. Divorced

4. Educational Qualification Level:

1. Certificate 2. Secondary 3. Higher Secondary 4. High Diploma
5. Bachelor Degree 6. Masters 7. PhD

5. Position Category:

1. Operational 2. Supervisory & Support 3. Professional & Management
4. Executive 5. Specialist

6. Position Level:

1. O4-O1 2. S5-SS1 3. P5-P1 4. EX3-EX1 5. ES-3-ES1

7. Service Experience:

1. New recruit 2. 1-2 years 3. 3-5 years 4. 6-10 years 5. 11-15 years
6. 16-20 years 7. 21-25 years 8. 26-30 years 9. Above 30 years

8. Annual Income:

1. Nu. 100000-150000 2. Nu. 151000-250000 3. Nu. 251000-350000
4. Nu. 351000-450000 5. Above 450000

9. Location of the Office:

1. Paro 2. Samtenling 3. Khangma

10. Service Group Category:

1. General 2. Technical

Part-II: Information of Organizational Core Competency

Please tick/circle any following number (5-1) that best describes your answer on the questions on each row (5-Strongly agree. 4-Agree. 3-Neutral. 2- Disagree. 1-Strongly Disagree):

Q. #	Question	Choice of answer				
11	The vision of AMC is clear.	5	4	3	2	1
12	The mission of AMC is clear.	5	4	3	2	1
13	The mandates of AMC is clear.	5	4	3	2	1
14	The planning system of AMC is clear.	5	4	3	2	1
15	The monitoring system of AMC is clear.	5	4	3	2	1
16	The evaluation system of AMC is clear.	5	4	3	2	1
17	The planned activities in AMC is executed on time.	5	4	3	2	1
18	AMC has satisfactory infrastructure.	5	4	3	2	1
19	AMC has sound financial capital.	5	4	3	2	1
20	AMC has required human capital.	5	4	3	2	1

Part-III: Information of Individual Core Competency

Please tick/circle any following number (5-1) that best describes your answer on the questions on each row (5-Strongly agree. 4-Agree. 3-Neutral. 2- Disagree. 1-Strongly Disagree):

Q. #	Question	Choice of answer				
21	There is room for individuals to strive for the same organizational goal in AMC.	5	4	3	2	1
22	There is room to focus on activities that support organizational priorities in AMC.	5	4	3	2	1
23	There is room for recognition of individual work contribution in AMC.	5	4	3	2	1
24	There is room to understand the emerging needs of the employees in AMC.	5	4	3	2	1

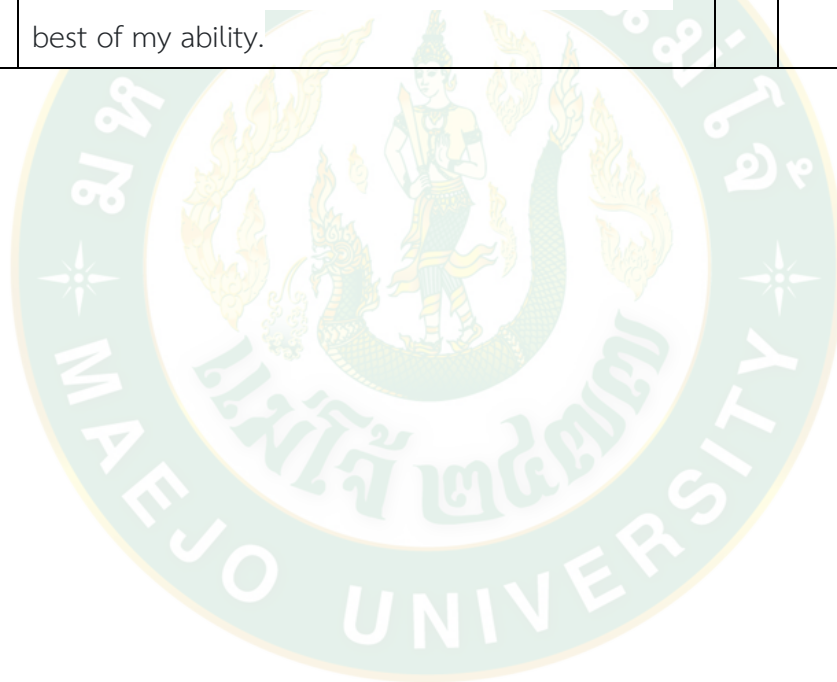
25	There is room for feedback and improvement in AMC	5	4	3	2	1
26	I take the opportunity to do new things for the betterment of AMC.	5	4	3	2	1
27	I take additional responsibilities without being asked.	5	4	3	2	1
28	I consider my job and duty in AMC above other businesses.	5	4	3	2	1
29	I am actively participating in development undertakings in AMC.	5	4	3	2	1
30	I adhere to the terms of reference of my job while performing my duty.	5	4	3	2	1
31	I take the responsibility for the mistakes I have committed.	5	4	3	2	1
32	I believe in collaboration and cooperation for organizational success.	5	4	3	2	1
33	I share the knowledge, expertise and encouragement to strengthen team performance.	5	4	3	2	1
34	I have no issues in communicating with others.	5	4	3	2	1
35	I use the appropriate language to the audience for official communication.	5	4	3	2	1

Part-IV: Information of Performance

Please tick/circle any following number (5-1) that best describes your answer on the questions on each row (5-Strongly agree. 4-Agree. 3-Neutral. 2- Disagree. 1-Strongly Disagree):

Q. #	Question	Choice of answer				
36	AMC generated required technology so far.	5	4	3	2	1
37	AMC released required technology so far.	5	4	3	2	1
38	AMC developed required standards so far.	5	4	3	2	1

39	AMC certified required technologies so far.	5	4	3	2	1
40	AMC developed required training materials so far.	5	4	3	2	1
41	AMC conducted required trainings so far.	5	4	3	2	1
42	My career advanced as expected until now.	5	4	3	2	1
43	I get to learn new things and ideas while doing my job.	5	4	3	2	1
44	I am keen to learn and acquire new knowledge and skills to meet changing requirements for my job.	5	4	3	2	1
45	I am satisfied with my job performance so far.	5	4	3	2	1
46	I feel I have shouldered the responsibilities in the best of my ability.	5	4	3	2	1



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