Knowledge Management Status in Eswatini

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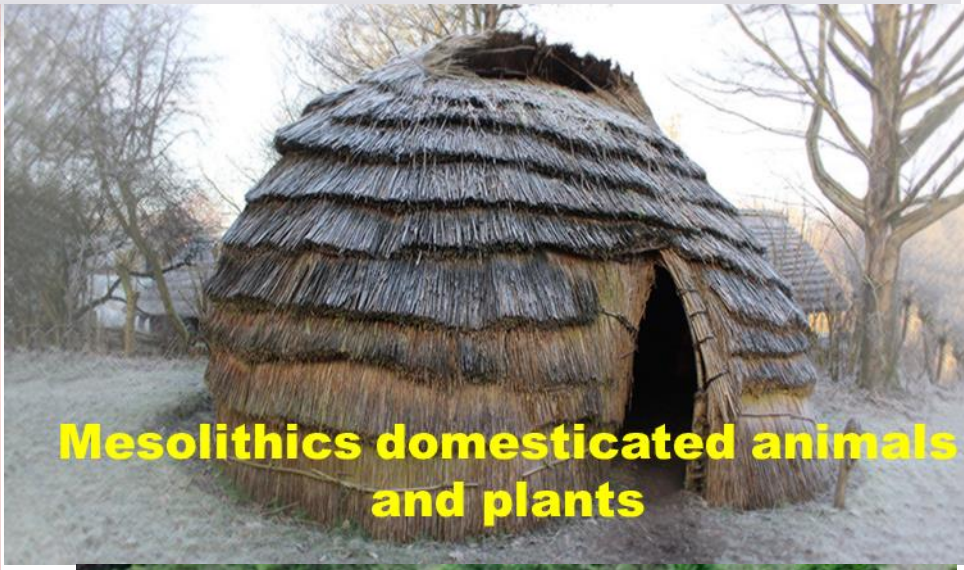
INTRODUCTION

- The structure of the world economic activity has been evolving over time, shifting from a primitive to an industrialised, and now to a knowledge-based economy (de Vries, 1994).

- Such a structural transformation is ever occasioned by the different revolutions hence the change in sources of economic power.

FROM PREHISTORIC TO HISTORIC PERIOD

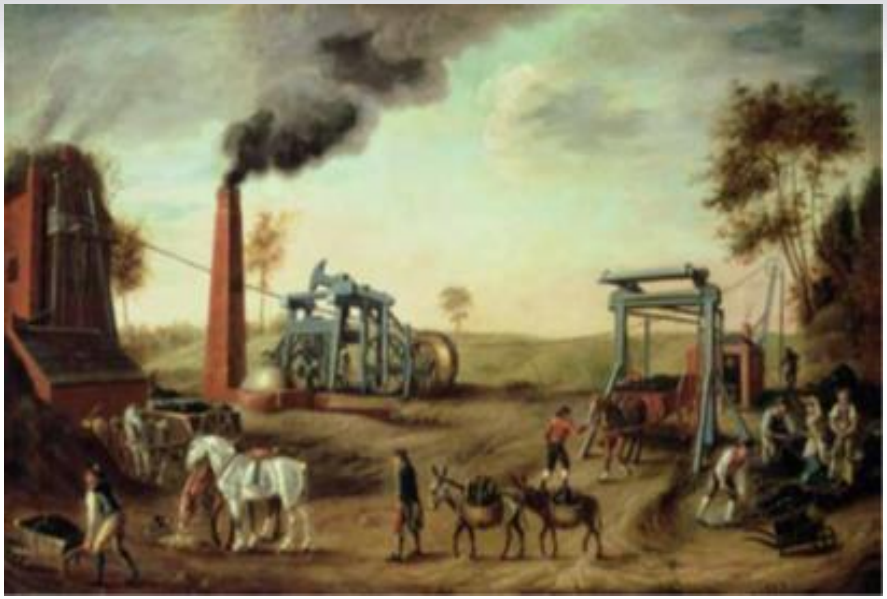


IFAD
Investing in rural people

CAADP XP4 PROGRAMME

CCARDESA
Centre for Coordination of Agricultural Research and Development for Southern Africa

1IR: FIRE



The period of rapid change from manual production (conventional agriculture) to mass production (mechanisation).

2IR: ELECTRICITY, GAS & OIL

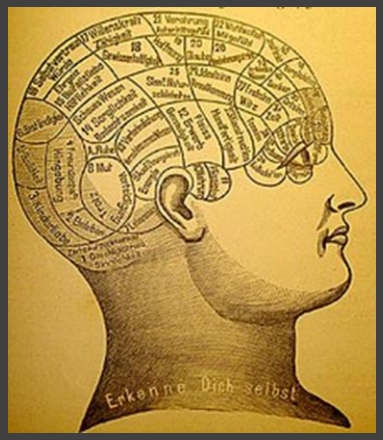
FROM FIRE TO ELECTRICITY

3IR: TECHNOLOGY (ICT)

KNOWLEDGE-BASED ECONOMY

- **The post-industrial era has experienced yet another drastic shift from a products-based to a knowledge-based economy (KBE) occasioned by both the technological revolution and the dawn of the Fourth Industrial Revolution (4IR) (Lee & Hong, 2002; World Economic Forum, 2018).**

4IR+: DIGITIZATION + AI=KBE



HIGHLY SKILLED WORKERS

THE KNOWLEDGE BASED ECONOMY

SMART FACTORIES

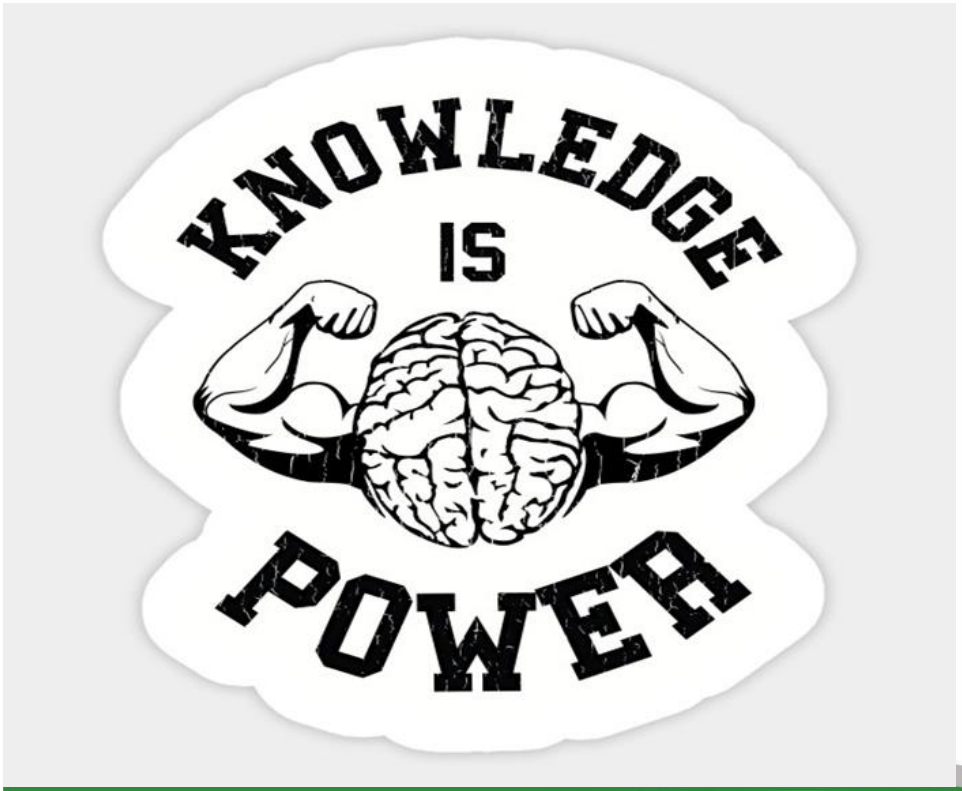
INFOBESITY

INVESTMENTS IN MODERN TECHNOLOGIES

GLOBALISATION

INTRODUCTION [CONT...]

- **The economy that was once reliant on traditional resources of economic power as the main strategic resources for economic productivity, has now been complemented if not replaced by a KBE.**



KNOWLEDGE has thus become the only KEY CATALYST and strategic driver for economic growth, sustainable performance and competitive advantage hence the economy is referred to as a KBE.

Traditional resources of economic power such as natural, labour and capital

INTRODUCTION [CONT…]

- **CRITICAL EXECUTIVE SKILL: In a society that is heavily reliant on knowledge, Drucker (in Nonaka & Takeuchi, 1995) notes that the capacity to manage knowledge has so become the most critical executive skill.**

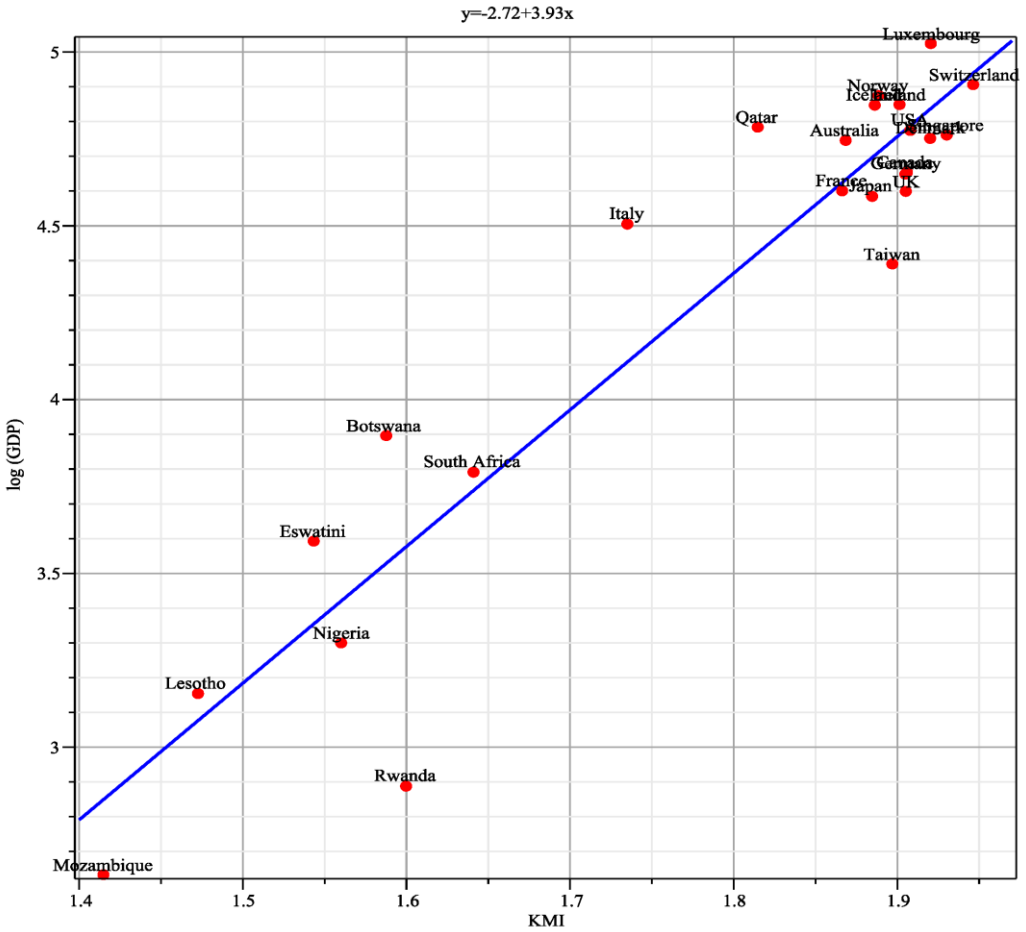
- **COMPETITIVENESS: The only sustainable competitive advantage a firm has comes from what it collectively knows, how efficiently it uses what it knows and how readily it acquires and manages new knowledge (Daveport & Prusak, 1998).**

- **NOT TO BE LEFT TO CHANCE: Senge (1996) postulates that in an economy that is solely depended on knowledge as the only key strategic resource for quality performance and sustainable competitiveness, KM is too important to be left to chance.**

INTRODUCTION [CONT...]

- **KM INVESTMENT: Advanced and emerging economies have leveraged on investments in KM for improved business performance, higher levels of innovation and greater economic edge (De Long & Seemann, 2000; Lee & Hong, 2002; Tong & Shaikh, 2010).**

INTRODUCTION [CONT...]



❖**Power Law: A study by Mkhatshwa and Mkhonta (2020) reveals that an increase in a country's KMI leads to a higher GDP.**

INTRODUCTION: PROBLEM

KNOWLEDGE ATTRITION: The heavy reliance on tacit knowledge lead to KNOWLEDGE LOSS due to premature death, baby-boomer retirements, staff attrition and highly skilled workforce mobility and layoffs (Dahiru 2016:11).

AIM OF THE STUDY

- **It is against this backdrop that this study is premised.**

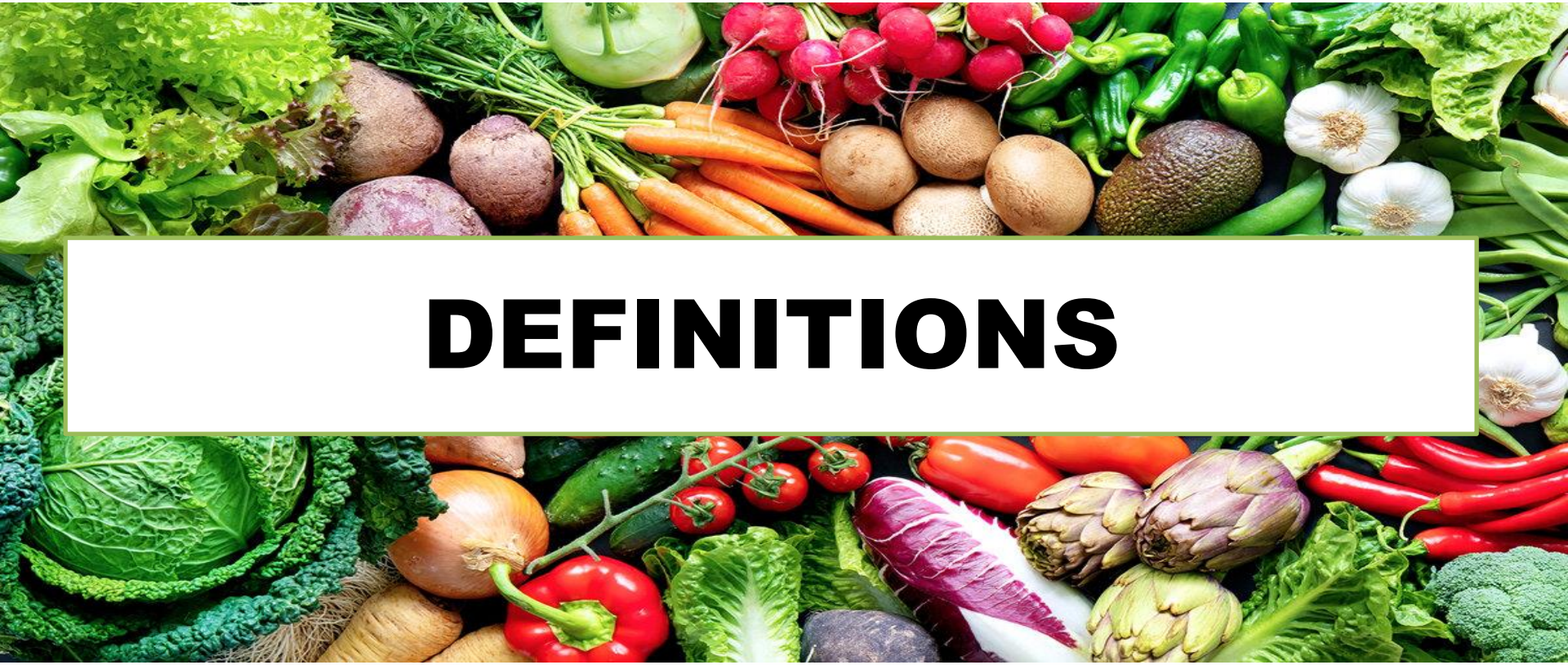
- **AIM: To explore Eswatini's KM status and make recommendations incidental thereof.**

METHODOLOGY

- **EXPLORATORY DATA MINING TECHNIQUE**: The study adopted a quantitative exploratory data mining technique to identify, examine, analyse and interpret data from databases (Anane, 2001).

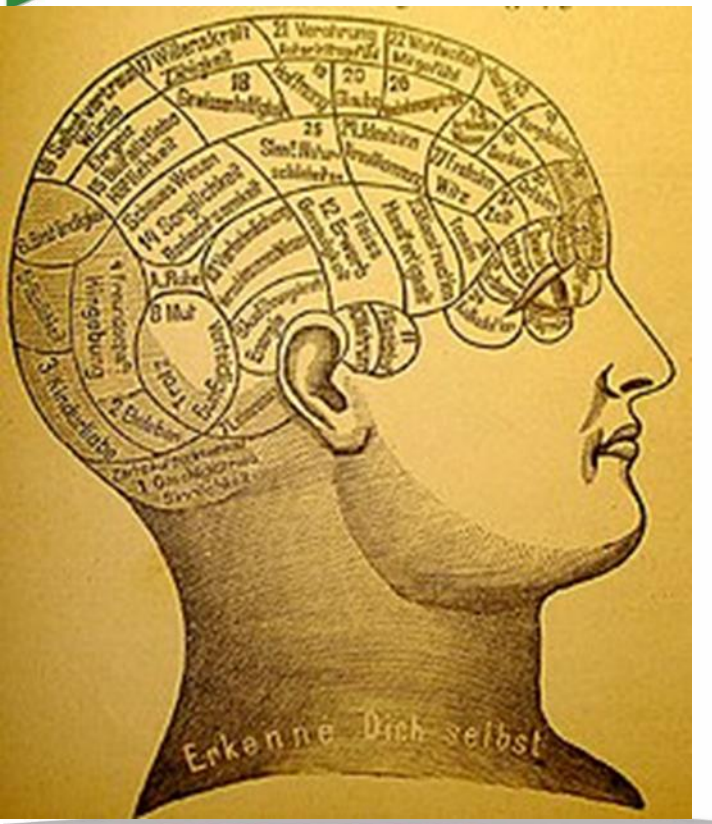
- **TRIANGULATION OF MEASURE**: Having identified gaps in secondary data, the study was complemented by the qualitative triangulation of measure wherein key informants were purposefully identified and interviewed (Neuman, 2011).

- **Inductive thematic analysis**: An inductive approach was used to analyse both datasets following the three stages of specific observation, pattern recognition and drawing conclusions (Creswell, 2013).



DEFINITIONS

KNOWLEDGE



- A **fluid mix** of **contextual information**, **meaningful facts**, practices, **framed experiences**, belief systems, values, and expert insights which have been **evaluated**, **internalised** and **organised** in the human mind (Behrens et al, 1999:4; Keyi Wang & Ma, 2010).

- The **HUMAN MIND** with **INFORMATION** that has been **EVALUATED**, **SYNTHESISED**, **INTERNALISED** and **ORGANISED** to **influence** and **inform** one's **insights**, **judgements**, **belief systems**, **behavioural patterns** and **WORK PERFORMANCE**

KNOWLEDGE TAXONOMIES

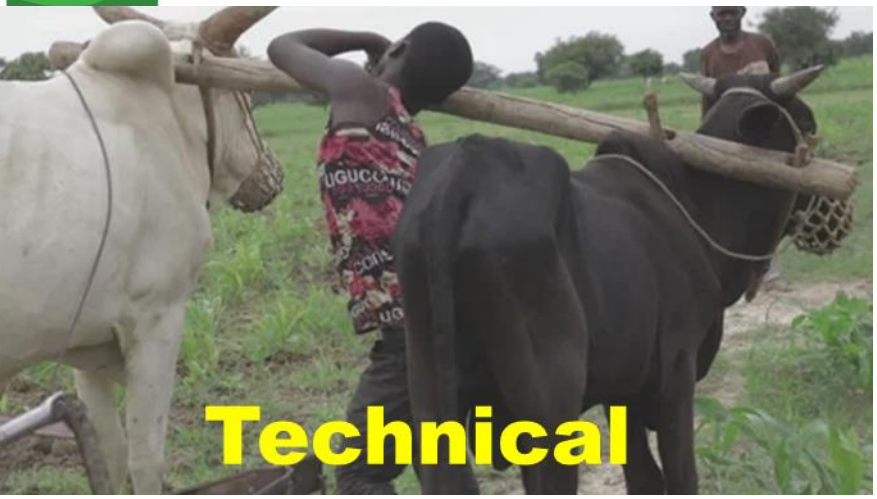
EXPLICIT KNOWLEDGE

- **Knowledge that exists in non-human storehouses in the form of books, journal articles, compact discs, digital video displays, written policies, manuals, procedures, reports, memoranda (Mostert & Snyman, 2007; Nonaka & Takeuchii, 1995).**

TACIT KNOWLEDGE

- **MIND KNOWLEDGE: It is intrinsically subjective and highly individualistic in that it is deeply rooted and tied to human senses, movement skills, physical experiences, intuition, values, belief systems and rules of thumb.**

TYPES OF TACIT KNOWLEDGE



- **TYPES: Tacit technical (know-how), moral (innate moral inclination), social (know-who and know where) and cognitive (know-what).**

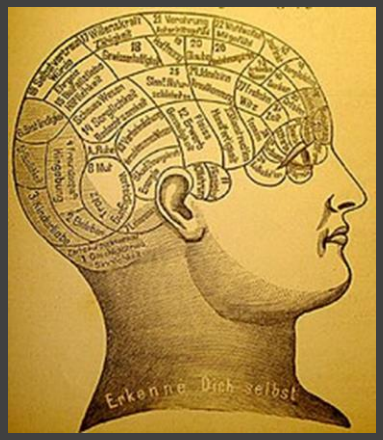
TYPES OF TACIT KNOWLEDGE

- **EXAMPLE: Indigenous agricultural knowledge (climate, soil, seeds, farming techniques, irrigation and water management, pest control, harvesting and preservation methods) created, preserved and transmitted from generation to generation (Melash et al, 2023).**

Knowledge Economy

- **Society or economic milieu wherein knowledge is the only strategic driver and dominant resource for value creation.**
- **A society characteristic of transformation and investments in universities, science, technology, research and innovation; and through the harmonization of education standards and mutual recognition of academic and professional qualifications (African Union Commission, 2015).**

THE KNOWLEDGE BASED ECONOMY



HIGHLY SKILLED WORKERS

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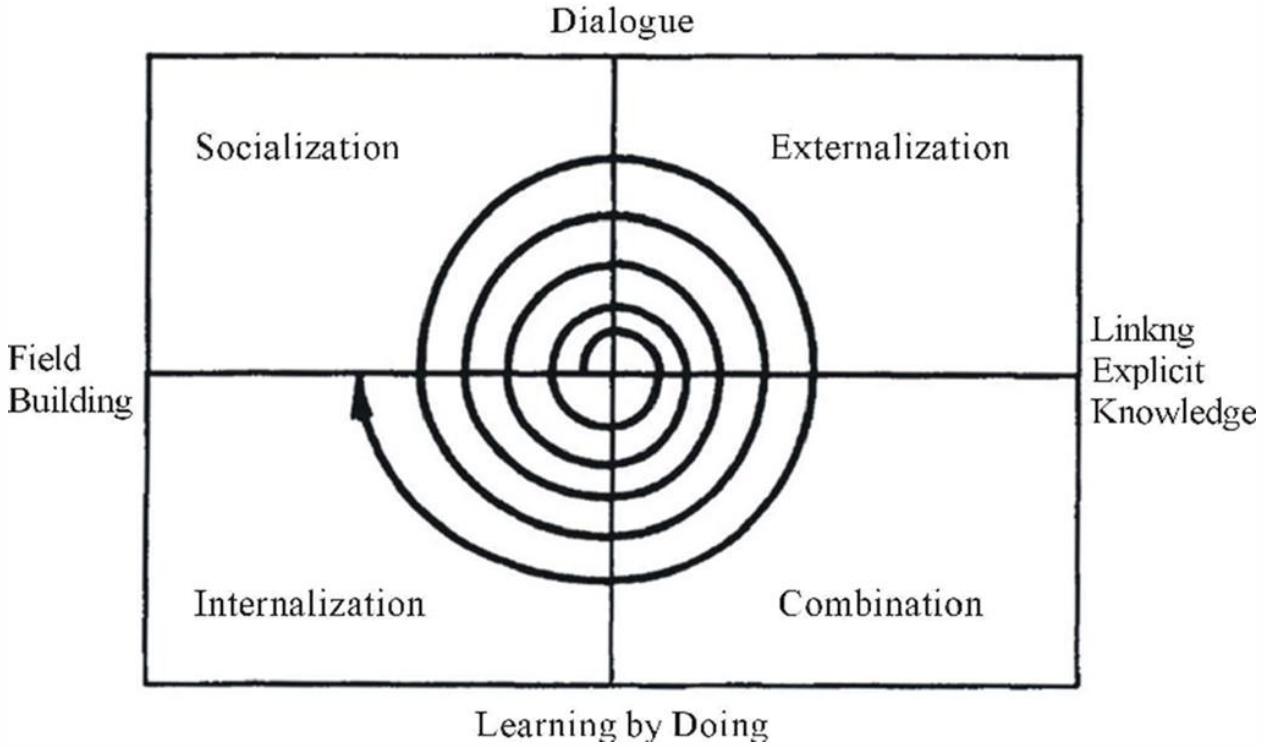
KNOWLEDGE MANAGEMENT

Knowledge Management

- **DEFINITION**: Both an academic discipline and practice-based process whereby **strategic approaches** are employed to identify, capture/create, store, retrieve, share, utilize, protect and evaluate **valuable organisational knowledge** for **VALUE CREATION** (Ansari, 2019; Dalkir, 2005; ISO 2018).

AIM: To improve the capability of an organisation to systematically handle its valuable knowledge, **build a systemic organizational memory**, make knowledge available in the entire system of the organization, **provide access to corporate memory** and to **protect knowledge** (Wiig, 1986).

KM MODEL: SECI



Like most, if not all academic disciplines, KM is informed by THEORIES and MODELS, the SECI being the widely used.

SOCIALISATION

Refers to the conversion of individual tacit knowledge (individual IAK) into more COMPLEX OR GROUP tacit knowledge (community IAK) through shared experiences, observation and imitation (learning by doing) for organisational learning and capacity building.

EXTERNALISATION

The conversion of complex tacit knowledge (community IAK) into new explicit knowledge through interviews, acquisition, documentation and usage to offer valuable insights that complements scientific data for a universal change in agricultural productivity (Melash et al 2023).

COMBINATION

Different elements of explicit knowledge are combined with other explicit knowledge to create more complex explicit knowledge – RESEARCH

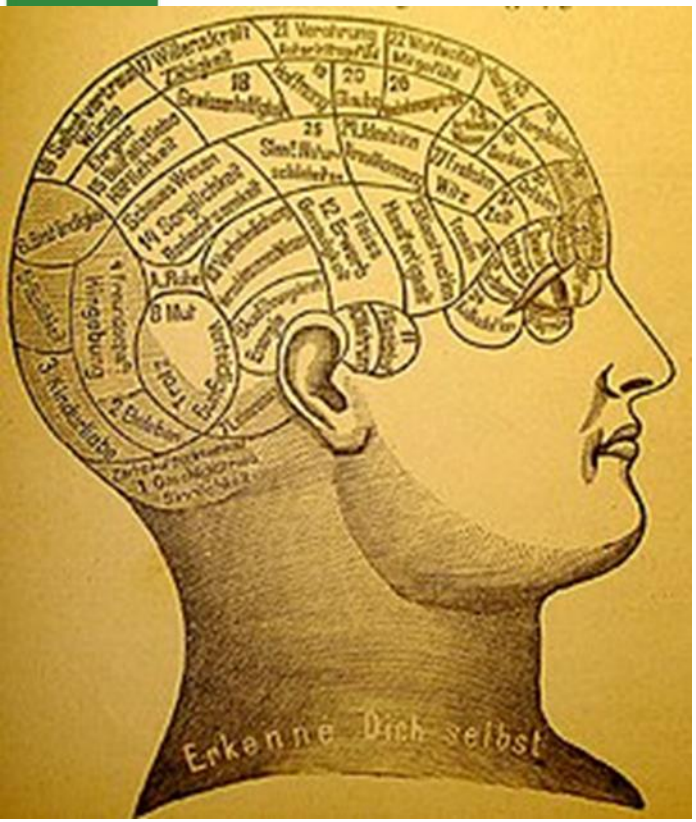
INTERNALISATION

Individuals read, interpret, convert, internalise, and embody complex explicit knowledge into tacit knowledge.

KNOWLEDGE MANAGEMENT STRATEGIES

From the SECI model, two KM strategies are deduced

PERSONALIZATION



- **Knowledge personalization is the process whereby knowledge that is closely tied to individuals and teams is shared through socialisation and internalization (ISO 2018).**

CODIFICATION

The process whereby knowledge that is fundamentally rooted into the minds of professionals and veteran employees is strategically harvested, represented in written form and stored (combination and internalisation) where it can be easily accessed, retrieved and used by anyone employee within the organisation (ISO 2018).

KNOWLEDGE MANAGEMENT PRACTICES: ACSSUPP

KNOWLEDGE AUDIT

- **Analysis of existing explicit and tacit knowledge resources of an organisation through identification, classification and measurement (ISO 2018).**

KNOWLEDGE CREATION

- **A social and epistemic process of sharing, justifying, synthesising, and group-validating individual knowledge to create new knowledge that transcends the boundary of individual limitations.**

- **PROCESS: Knowledge creation takes place through the interaction of two modes of knowledge conversion, socialization (from individual tacit to group tacit knowledge) and externalization (from tacit to explicit knowledge).**

KNOWLEDGE STORAGE AND INDEXING

- Refers to the organizational memory formation process, wherein knowledge is formally stored in physical and electronic memory systems and retained as values, rules and beliefs that are associated to organizational culture.

- STORAGE STRATEGIES: This occurs through the interaction of two modes, combination (from separate to systemic explicit knowledge), and internalization (from explicit to tacit knowledge) which represents the codification and personalization strategies.

KNOWLEDGE SHARING

- **DEFINITION**: **Social** and **systemic** process whereby **individuals and groups** **strategically and purposefully exchange** **tacit and explicit knowledge** within and across departmental and organisational boundaries through direct and/or indirect interaction.

- **AIM**: To reduce the **risks of knowledge loss**, and further provide inherent benefits of greater **knowledge utilisation** for maximised **performance** and **competitiveness**.

KNOWLEDGE UTILISATION

- **DEFINITION**: Refers to the actual application or use of new knowledge (self-transcending tacit and systemic explicit) in **business processes** for decision-making and problem-solving, innovation and creativity and improved work performance (Dalkir 2005:146; Lenart-Gansiniec 2022:239).

- **AIM**: The main objective of knowledge application is to enhance organisational learning and integrate new knowledge to organizational operations for value creation.

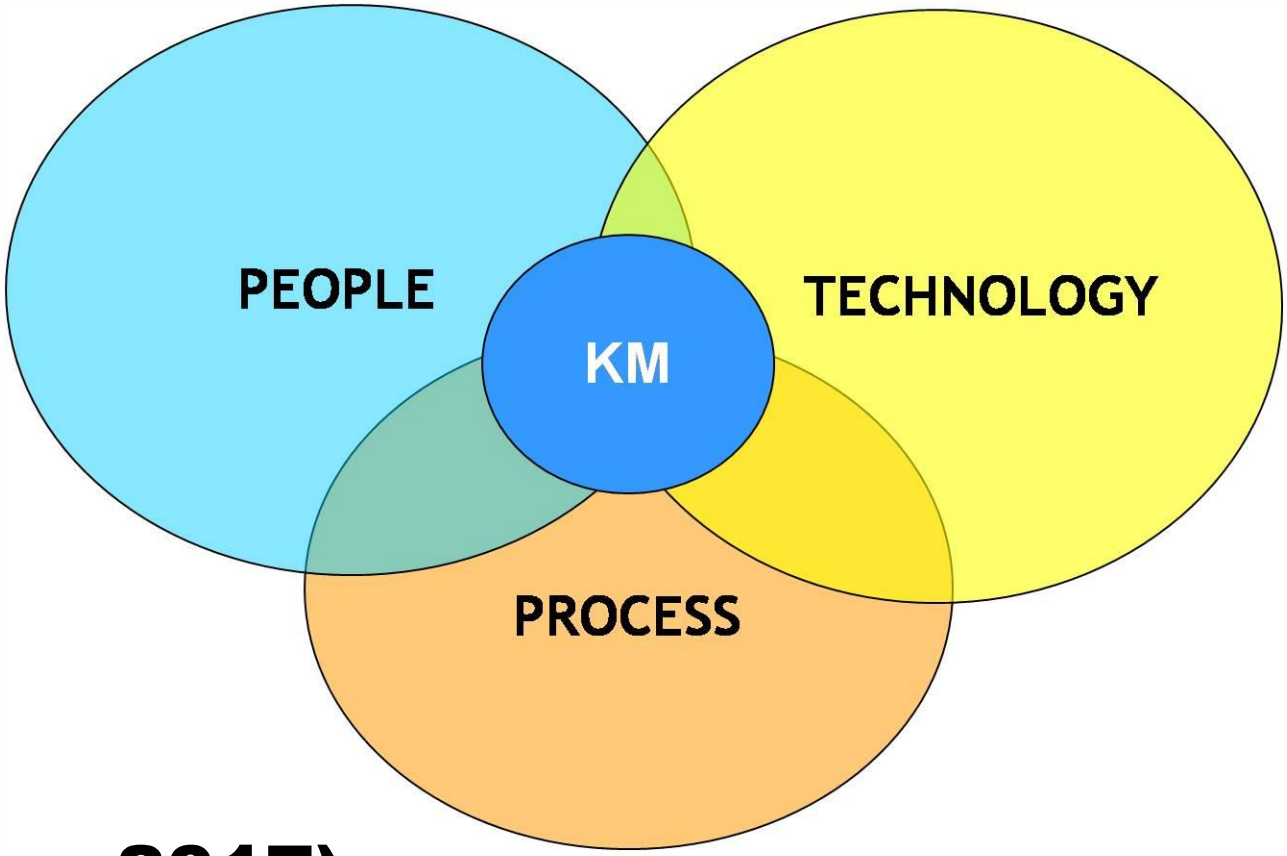
KNOWLEDGE PROTECTION

Nonaka and Toyama (2005:431) advise that companies need to go beyond the normal KM practices to embrace a culture of KP to protect its intellectual property by adopting the various KP mechanisms (Intellectual property rights, non-disclosure agreements).

Knowledge Performance evaluation

Organization should continuously evaluate the knowledge performance in terms of its suitability, adequacy and the effectiveness of their KMS (ISO 2018).

KM COMPONENTS



(Monaco, 2017).

KNOWLEDGE MANAGEMENT ENABLERS - KNOWLEDGE MANAGEMENT SYSTEM

This refers to the entire knowledge management system which include the organization's knowledge management culture, organisational structure, governance and leadership; roles and responsibilities; planning, technology, processes and operation.

PEOPLE

- **People play a critical role in Knowledge Management because the success of knowledge management depends on the willingness of people to share their Knowledge and for organisations to have the human resources to support all knowledge management processes.**

- **Example enablers include chief knowledge officer; community of practice facilitator.**

Leadership

- **Effective KM hinges on leadership because it is the sole responsibility of leaders to spearhead the strategic planning process and its implementation in organisations.**

- **Role of leadership: Communicate the benefits KM, ensure that CKM practices are embedded in business strategy and operations, availability of resources, creating an energizing and enabling ba, create an enabling organisational culture, provision for rewards and incentives and having the right personnel.**

- **Middle-up-down management model: Top management provides "visions for direction“, timelines, middle management translates these visions into middle range visions, which are to be realized by lower management and the working group.**

- **It is in that regard that Senge (1996) argues that nothing can start without the commitment leadership.**

PROCESS

- This refers to a set of interrelated or interacting activities which transform inputs into outputs.

- **Processes**: These are defined knowledge activities applied and embedded within organizational processes, and they include procedures, instructions, methods and measure.

- **Example**: KM processes include knowledge discovery, knowledge capture and creation, Knowledge sharing and brokering, and knowledge application of learned Knowledge.

Technology and infrastructure

- **Technology and infrastructure: This refers to digital channels, virtual and physical workspace and other tools.**

- **Example: This include mobile applications; portals; WIKIs;**

Governance

- **Governance: This refers to strategy, expectations and means of ensuring the knowledge management system is working in alignment.**

- **Example: It include knowledge management strategy; policies; service level agreement; code of conduct.**

Knowledge management culture

- **Knowledge management culture: Attitudes and norms regarding sharing, learning from mistakes.**

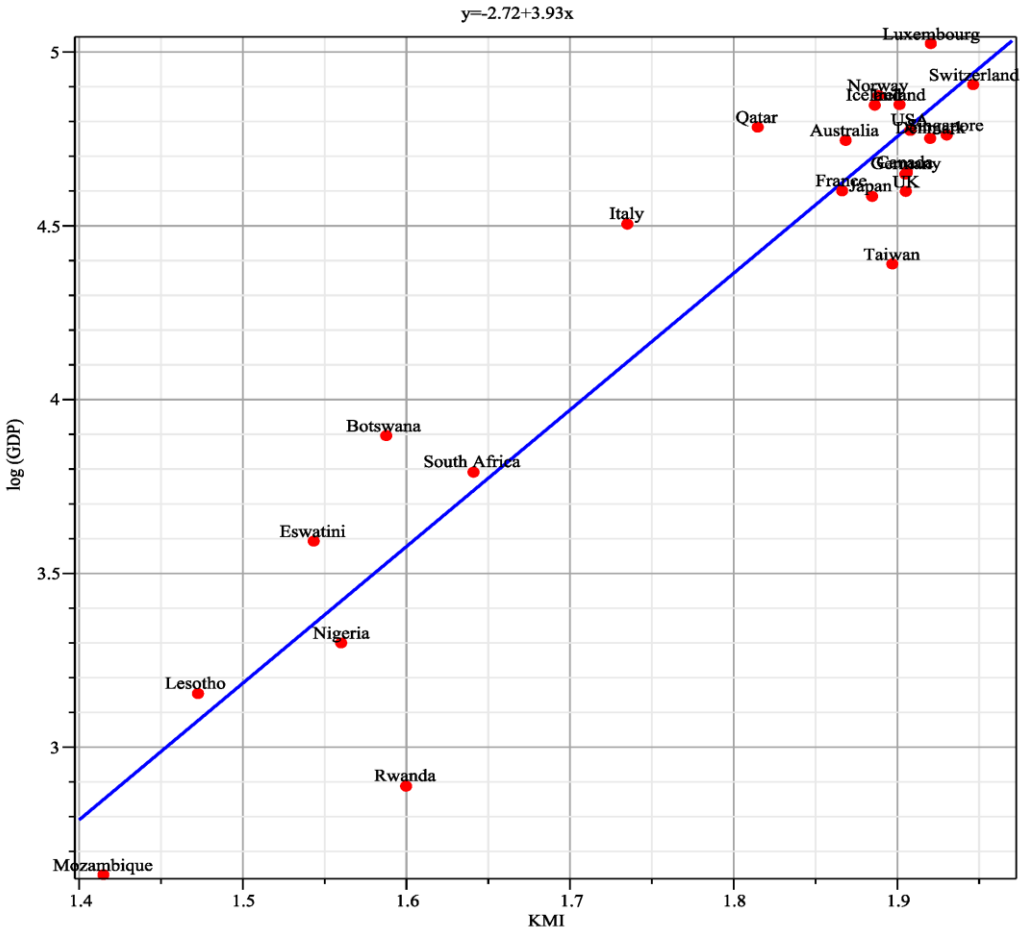
- **Example: This includes admitting and explaining a mistake is rewarded rather than punished.**

KNOWLEDGE MANAGEMENT BENEFITS: PCCIDPA

QUALITY ORGANISATIONAL PERFORMANCE

Empirical studies reveal that KM has a direct impact on quality and long-term organisational performance particularly in areas of increased productivity, finance and staff performance.

KMI VS GDP PER CAPITA (NOMINAL)



❖**Power Law: A slight increase in the KMI leads to a higher GDP (Mkhatshwa & Mkhonta, 2020).**

ORGANISATIONAL COMPETITIVENESS

KM enhances the ability of a firm to operate more competitively in domestic and global markets, deliver quality and diverse products/services faster than their competitors while at the same time creating conditions for long-term survival in a VUCA world (Liučvaitienė, Peleckis, Slavinskaitė & Limba 2013:3; Omerzel & Gulev 2011:339).

CREATIVITY AND INNOVATION

Modern harvest technologies

KM enhances the ability to generate and apply innovative ideas and the refinement and applicability of new perspectives on existing ideas and behaviours to improve organisational processes, operations, products and services in constant market shift.

EFFECTIVE AND EFFICIENT PROBLEM SOLVING

- **AVOIDANCE OF DUPLICATION**: The ability of organisations to **strategically manage its valuable knowledge** helps **avoid replicating** same **mistakes**, **reduce redundancy** and the need to **solve problems from scratch** (Emuze & Smallwood 2011:3; Lin & Lee 2012:422; Tserng & Lin 2005:301-302).

- **RISK MINIMISATION**: KM enhances agricultural risk minimization, resilience to external shocks (climate change) to ensure sustainability of agriculture.

EFFECTIVE AND EFFICIENT DECISION MAKING

- **KM is critical in nurturing expansive patterns of thinking thus enhancing systemic organisational memory which widens the spectrum of potential choices in informed decision-making (Choo 2001:197-198; Cristea & Căpaţînă 2009:360).**

COUNTER CORPORATE AMNESIA

- **PERCENTAGE OF EXPLICIT/TACIT KNOWLEDGE:** Esther et al (2005:518) posit that about 20% of construction project knowledge is explicit while the other 80% is tacit knowledge and remains vulnerable to knowledge loss.
- Much as IAK (80%) has always been an essential power for agricultural development in Africa, this knowledge remains vulnerable to knowledge loss (Melash et al 2023).
- **CURB CORPORATE AMNESIA:** Considering that tacit knowledge is intrinsically fixed in human minds who are most likely to leave their employers for alternative employment leaving with them 80% of critical IAK, KM therefore is a mitigating factor to curb corporate amnesia

KNOWLEDGE MANAGEMENT STATUS IN ESWATINI

KNOWLEDGE MANAGEMENT STATUS

In line with ISO 30401:2018 as amended, K4Health, and related literature in the K space, the KM status is measured in line with certain indices:

Knowledge Economy Index, membership in ISO, KM and field related legislative framework, customisation of standards to national policy frameworks and Knowledge Management Index (implementation).

Knowledge Economy Index (KEI) In African countries

- **DEFINITION: An aggregate index representing a country's progress and overall preparedness to compete in the knowledge-based economy across four subindexes: Economic Incentive and Institutional Regime, Innovation and Technological Adoption, Education and Training, and Information and Communications Technologies (ICT) Infrastructure (World Bank, 2012).**

- **KNOWLEDGE USAGE: It considers whether the environment is conducive for knowledge to be used effectively for economic development.**

- **MEASUREMENT CRITERIA: A country's KEI is measured in terms of performance in line with the four pillars in an index of 0 - 10 wherein 0 = lowest and 10 = highest.**

Knowledge Economy Index (KEI) In African countries

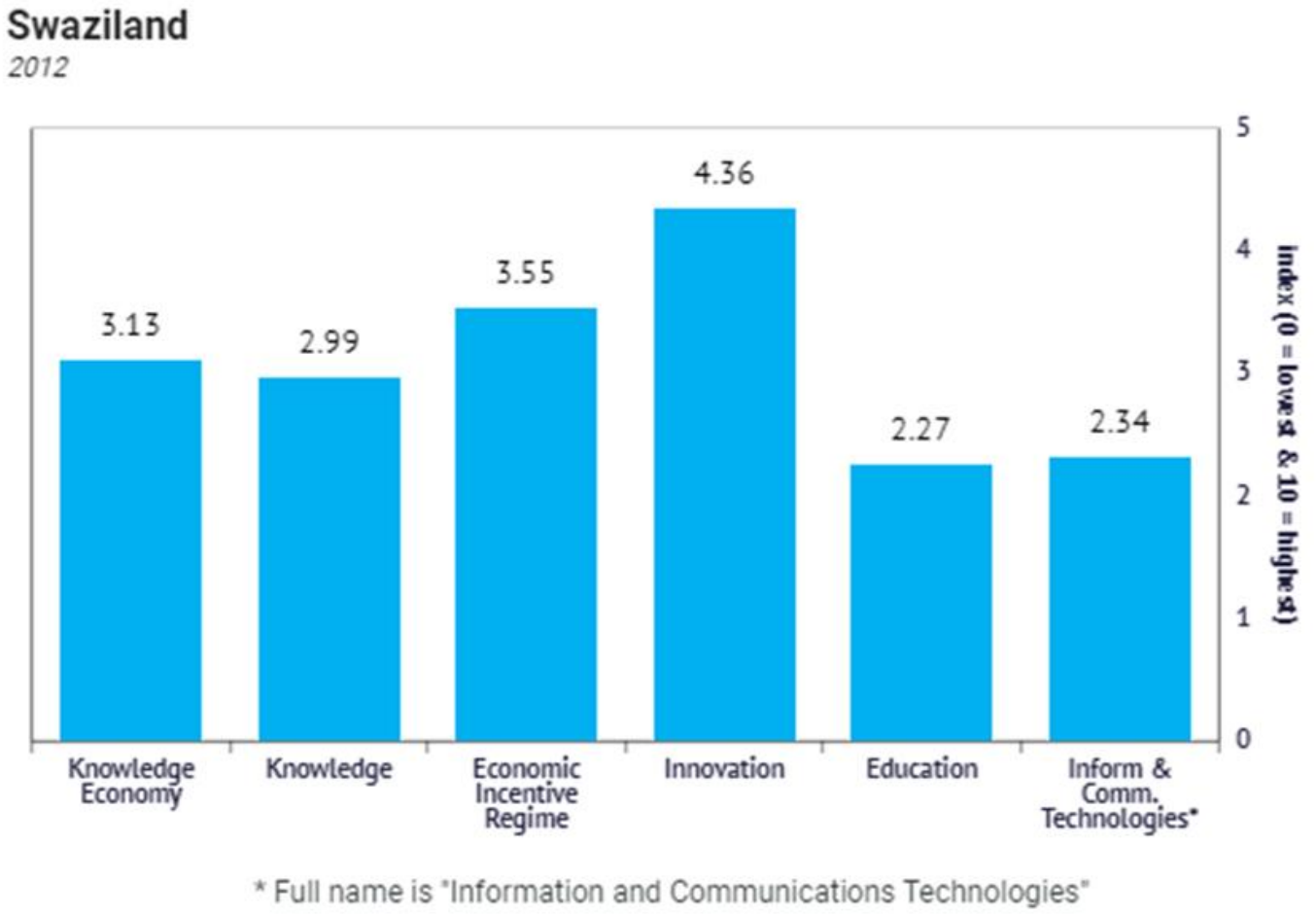
- **FIRST TOP**: At the top of the list is **Mauritius (5.52)** followed by **South Africa (5.21).**

- **SECOND TOP**: **Tunisia (4.56)**, followed by **Botswana (4.32)** and **Namibia (4.10).**

- **THIRD TOP**: **Algeria (3.79)**, **Egypt (3.78)**, **Morocco (3.61)**, **Cape Verde (3.59)** and **Eswatini (3.13).**

- **ESWATINI RANKING**: Out of **36 countries**, Eswatini ranks **number 10** which is a **huge milestone**.

ESWATINI KEI



(World Bank, 2012).

KNOWLEDGE MANAGEMENT LEGISLATIVE FRAMEWORK

- **THE CONSTITUTION OF THE KINGDOM OF SWAZILAND ACT 2005: An Act to provide for the constitution of the Kingdom of Swaziland, 2005.**

- **THE DATA PROTECTION ACT NO. 5 OF 2022: This is an Act which provides for the collection, processing, disclosure, and protection of personal data balancing competing values of personal information privacy and sector-specific laws and other related matters.**

- **THE Archives Act No. 5 of 1971: An Act to provide for the custody, care and control of public archives in Eswatini and for matters incidental thereto.**

- **THE ELECTRONIC COMMUNICATIONS AND TRANSACTIONS ACT NO 3 OF 2022: An Act which provides for the regulation of electronic transactions, electronic communications and the use of e-government services and other incidental matters thereof.**

- **THE COMPUTER CRIME AND CYBERCRIME ACT NO 6 OF 2022: An Act to criminalise offences committed against and through the usage of computer systems and electronic communications networks.**

KNOWLEDGE MANAGEMENT LEGISLATIVE FRAMEWORK

- **THE ESWATINI BROADCASTING ACT NO 7 OF 2023: An Act to provide for the establishment of the Eswatini Broadcasting Corporation, the regulation and licensing of broadcasting services and their content in Eswatini.**

- **ESWATINI NATIONAL CYBERSECURITY STRATEGY 2022 – 2027: This provides a national framework detailing a comprehensive and coherent approach to protecting the critical national Infrastructure and systems, data, networks businesses as well as citizens of Eswatini from cyber threats.**

- **NATIONAL RECORDS MANAGEMENT POLICY: A policy which provides guidelines and best practices on the efficient and systematic control of the creation, receipt, maintenance, storage, distribution, usage, and disposal of records by Eswatini Government Ministries, Departments, Government parastatals as well as private sector organizations in line with ISO 15489.**

- **ESWATINI INDIGENOUS KNOWLEDGE SYSTEMS (IKS) POLICY: The instrument is currently at draft stage of which upon completion will provide for recognition, preservation, and harnessing of indigenous knowledge in the country.**

KNOWLEDGE MANAGEMENT INTERNATIONAL STANDARDS

- **ISO 9001: 2015**: The recognition of knowledge as an organisational resource and specified expectations for the management of such a resource thus providing a long-awaited level of legitimacy for KM.

- **ISO 30401:2018**: In November 2018, ISO 30401 as amended in 2022, the standards set **requirements**, **provides guidelines for establishing**, **implementing**, **maintaining**, **reviewing and improving** an effective management system for KM in organisations (Carlucci et al 2022: 975).

- **PURPOSE**: The purpose of this ISO KMS standard is to support organizations to develop a KMS that effectively promotes and enables value-creation through knowledge (ISO 2018).

- **MEMBERSHIP IN ISO**: Eswatini is a member body of ISO through SWASA, and the authority has **ISO 30401:2018 as amended**.

KNOWLEDGE MANAGEMENT INTERNATIONAL STANDARDS

- **CUSTOMISATION: However, the country has not yet nationalised the standards through the formulation of a National KM strategic Framework though noting the certification of Mr. Mvubu.**

- **REGULATORY PERSPECTIVE: From a regulatory perspective, there is currently no government ministry, department, parastatal and private sector institution implementing ISO 30401:2018.**

CONCLUSION

- **KNOWLEDGE ECONOMY INDEX: The country is making good progress in positioning itself to compete effectively in the KBE.**

- **KNOWLEDGE MANAGEMENT LEGISLATIVE FRAMEWORK: The country is on the right track in terms of the enactment of data, information, knowledge and records management legislature though there is need to upscale herself.**

- **MEMBERSHIP IN ISO: The country has made good progress in its participation in ISO through though there is an implementation gap.**

RECOMMENDATIONS

- **National KM strategic Framework**: Apart from the enactment of related legislation, policymakers should spearhead the formulation of a ***National Knowledge Management Strategy Framework*** to **nationalise** and **map out the country's strategic implementation processes** of ISO 30401:2018 as amended for **government ministries**, **departments**, **state-owned entities** and the **private sector**.

- **ISO**: Considering the growing narrative on IKS, the Organization for Standardization should formulate standards to provide guidelines for the management and preservation of indigenous knowledge.

- **INDIGENOUS KNOWLEDGE MANAGEMENT POLICY**: Once ISO IKS are in place, **responsible government actors** should nationalise same through a National IKM policy or strategic framework.

- **SWASA**: With the availability of ISO and national policies and/or frameworks, government should take the lead to engage SWASA to spearhead trainings to government ministries, departments, state-owned entities, and private sector on the implementation of the standards.