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OROMIA STATE UNIVERSITY (OSU)
EDUCATION DELIVERY CORE PROVE
DEPARTMENT OF HUMAN RESOURCE MANAGEMENT & LEADERSHIP
JOURNAL ARTICLE ON
"KNOWLEDGE WEALTH ESTIMATION EQUATION"

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Synopsis

Today, more than ever, before the concept of knowledge and knowledge economics are dominating our glob. Different universities and colleges are 'bringing into being' tremendous number of workers annually. However, the basic limitation organizations and countries are facing is that no one still able to compute the amount of this knowledge wealth in terms of money even though it directly impacts the GDP level of the respective nation. There is also no significant formula to compute this knowledge wealth. The rationale behind this paper, therefore, is to help organizations and/or nations in granting 'knowledge Wealth computation equation' so that they can at least estimate the knowledge wealth they have currency-wise.

Key points

- ❖ Knowledge
- ❖ Knowledge wealth
- ❖ Factors that accelerate or decelerate knowledge wealth
- ❖ Knowledge wealth index
- ❖ Knowledge GDP (knowledge per capita)

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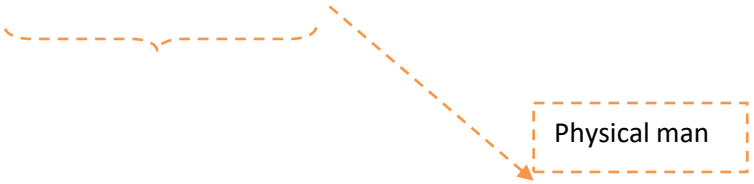
1. Introduction

From 17th -19th century individuals, organizations, and countries were running for land and capital. Europeans conquer Africans, Latinos and some part of Arians either directly or indirectly for both land and then capital resources. At that, every time there were no these much advanced universities and colleges. These two sources of knowledge are gradually evolved with the advancement of factories particularly in Europe and these is why more old aged, advancer and 1st ranked institutions are today located in Europe. Between these time ranges people kill people for land that is the origin of physical man and raw materials. The arrangement of factories of productions according to their importance at that moment was:

Land------Capital----Labor

Entrepreneurship



From this diagram, it can be inferred that Human resource (knowledge, skill, aptitude, talents, natural and artificial intelligences and tall mental powers) is the most neglected and unrewarded aspect of the organization and/or country. Although man was needed, it was not his/here knowledge aspect, but physical power to make them work in different factories and cottage industries after a bit training and development.

Today the sequence is changed. The feeling that if one has land and capital, the same will have all things does not work. The postulate on the ground today is that the neglected side of the given organization and/or country should be raised up and then recognized and rewarded which is knowledge asset are knowledge wealth. Today's sequence is:

Labor (HR) ------Capital----Land

Entrepreneurship

Human capital is a term popularized by Gary Becker, an economist from the University of Chicago, and Jacob Mincer that refers to the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value.

Alternatively, *human capital* is a collection of resources-all the knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom possessed individually and

collectively by individuals in a population. These resources are the total capacity of the people that represents a form of wealth, which can be directed to accomplish the goals of the nation or state or a portion thereof.

It is an aggregate economic view of the human being acting within economies, which is an attempt to capture the social, biological, cultural, and psychological complexity as they interact in explicit and/or economic transactions. Many theories explicitly connect investment in human capital development to education, and the role of human capital in economic development, productivity growth, and innovation has frequently been cited as a justification for government subsidies for education and job skills training.

"Human capital" has been and continues to be criticized in numerous ways. Michael Spence offers signaling theory as an alternative to human capital. Pierre offers a nuanced conceptual alternative to human capital that includes cultural capital, social capital, economic capital, and symbolic capital these critiques, and other debates, suggest that "human capital" is a reified concept without sufficient explanatory power.

It was assumed in early economic theories, reflecting the context, i.e., the secondary sector of the economy was producing much more than the tertiary sector was able to produce at the time in most countries-to be a fungible resource, homogeneous, and easily interchangeable, and it was referred to simply as workforce or labor, one of three factors of production (the others being land, and assumed-interchangeable assets of money and physical equipment). Just as land became recognized as natural capital and an asset in itself, human factors of production were raised from this simple mechanistic analysis to **human capital**.

In modern technical financial analysis, the term "balanced growth" refers to the goal of equal growth of both aggregate human capabilities and physical assets that produce goods and services. The assumption that labor or workforces could be easily modeled in aggregate began to be challenged in 1950s when the tertiary sector, which demanded creativity, begun to produce more than the secondary sector was producing at the time in the most developed countries in the world. Accordingly, much more attention was paid to factors that led to success versus failure

where human management was concerned. The role of leadership, talent, even celebrity was explored.

Today, most theories attempt to break down human capital into one or more components for analysis usually called "intangibles". Most commonly, social capital, the sum of social bonds and relationships, has come to be recognized, along with many synonyms such as goodwill or brand value or social cohesion or social resilience and related concepts like celebrity or fame, as distinct from the talent that an individual (such as an athlete has uniquely) has developed that cannot be passed on to others regardless of effort, and those aspects that can be transferred or taught: instructional capital. Less commonly, some analyses conflate good instructions for health with health itself, or good knowledge management habits or systems with the instructions they compile and manage, or the "intellectual capital" of teams – a reflection of their social and instructional capacities, with some assumptions about their individual uniqueness in the context in which they work. In general, these analyses acknowledge that individual trained bodies, teachable ideas or skills, and social influence or persuasion power, are different.

Management accounting is often concerned with questions of how to model human beings as a capital asset. However, it is broken down or defined, human capital is vitally important for an organization's success (Crook et al., 2011); human capital increases through education and experience. Human capital is also important for the success of cities and regions: a 2012 study examined how the production of university degrees and R&D activities of educational institutions are related to the human capital of metropolitan areas in which they are located. In 2010, the OECD (the Organization of Economic Co-operation and Development) encouraged the governments of advanced economies to embrace policies to increase innovation and knowledge in products and services as an economical path to continued prosperity.

International policies also often address human capital flight, which is the loss of talented or trained persons from a country that invested in them, to another country, which benefits from their arrival without investing in them. Studies of structural unemployment have increasingly focused on a mismatch between the stock of job-specific human capital and the needs of employers. In other words, there is increasingly recognition that human capital may be specific

to particular jobs or tasks, not general, and readily transferable. Recent work has attempted to improve the linkages between education and the needs of the labor market by linking labor market data to education loan pricing.

So far, I have not seen the term knowledge management especially when I was fresh student in Jimma University. Once up on a time I come to understood to what extent, economics is very rational for property not only but also knowledge. This is much related with knowledge economy. It is astonishing that many people even economics professor see the term economics from the view point of material development. Here I want to argue that we have to expand the term economics equally to intangible but very determining factor to the material wealth, which is knowledge wealth. The postulate here is that knowledge wealth is the determining factor of material wealth. To critically elaborate this factor I took in to consideration the following kinds terminologies:

1. Knowledge wealth
2. factors that accelerate or decelerate knowledge wealth
3. Knowledge wealth index
4. knowledge GDP(knowledge per capita)

The primary intent of this paper is to design some sort of formula and /or thermo, particularly in Ethiopia interest, that aid the country understand at least knowledge wealth is exist. To come to this point, First, I will critically elaborate only knowledge wealth.

1. Knowledge wealth

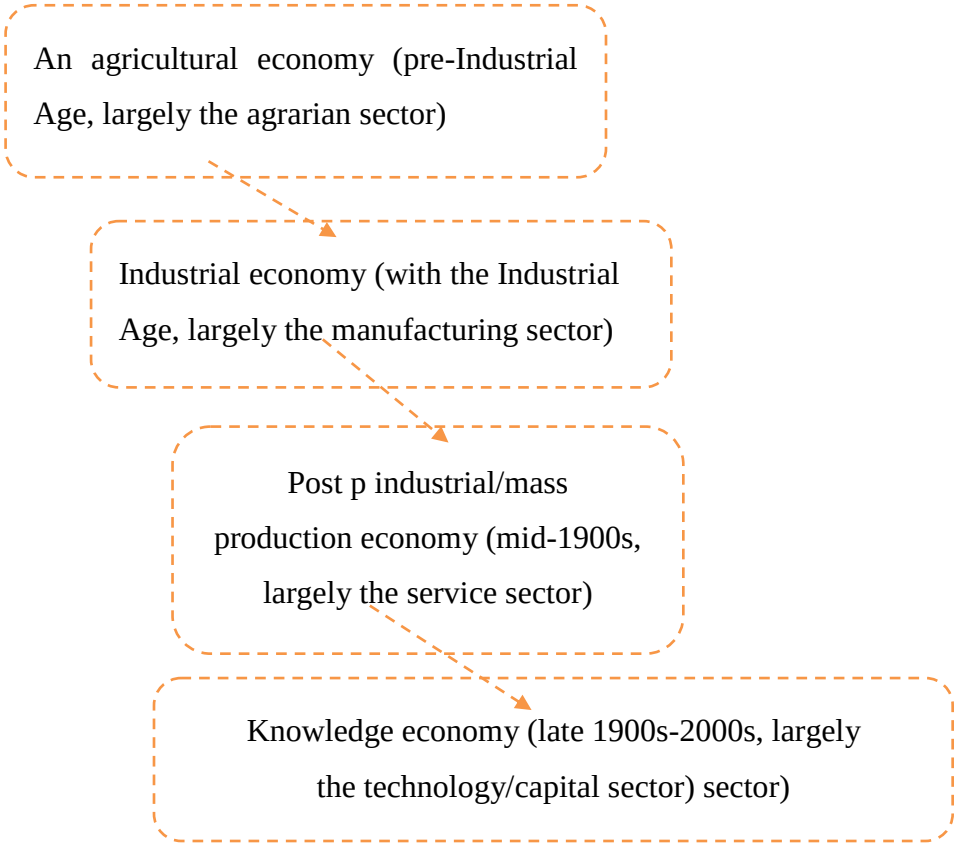
The old economic laws defined wealth in terms of land, labor, and capital. Whoever had them had exclusive use of them too. In the 21st century, these laws have changed. There are new wealth creation factors-information and knowledge-and they are synergistic.

The principle is this:

"If I give you a dollar and you give me a dollar, we both still have a dollar. If I give you an idea, and you give me an idea, we each have two ideas."

2. Evolution of knowledge wealth

The knowledge economy is also seen as the latest stage of development in global economic restructuring. Thus far, the developed world has transitioned from:



Remark

This latest stage has been marked by the upheavals in technological innovations and the globally competitive need for innovation with new products and processes that develop from the research community ***(i.e., R&D factors, universities, labs, educational institutes).***

In the knowledge economy, the specialized labor force is characterized as computer literate and well trained in, handling data, developing algorithms and simulated models, and Innovating on processes and systems. **Harvard Business School** Professor, Michael Porter asserts that today's economy is far more dynamic and that comparative is less relevant than competitive advantage, which rests on ***"making more productive use of inputs, which requires continual innovation".*** Not only the above listed scholars, scholars; others such as Peter Drucker talk much about the necessity of knowledge and knowledge wealth. In his oldest book named ″Wealth Of Nation″, he propagates:

"The most valuable assets of a 20th century company were its production equipment. The most valuable asset of a 21st-century institution, whether business or non-business, will be its knowledge workers and their productivity."

Drucker 1999, 1978, Pp. 135

Form the above indicated different facts; one can infer that knowledge is very important that other factors of production like land and capital in this 21 century. Here after, let me put to what extent knowledge exceed the importance of both land and capital in this 21 century, which was not this way in 17th, 18th, and 19th century. **Knowledge** is an asset for every organization. In fact, they are the leaders in this 21st century. They can share and spread their knowledge across the world for the benefit of humankind. There is also a huge potential lying untapped in this domain. Encouraging and providing conducive environment for their research and consultancy is needed. **The future belongs to knowledge workers**. The world is going to be ruled by specialists who have specific and exclusive competencies and key skills and abilities. If you want to be noticed, spotted, and remembered, evolving as a knowledge worker is the right solution.

Particularly in 19th century land was the most crucial and expensive asset. So people of the time sell what they have and purchase land.

"Having land is considered as having the entire thing."

In 19th century (during industrial revolution), capital becomes the most expensive asset. Different huge companies begin to generate huge amount of capital asset and then profit in the form of share, bond, and cash.

At this very era, having a capital was considered as having and conquering the world.

In 20 and 21th century, labor (Knowledge, skill and ability) takes its turn to be an n expensive asset. Accordingly, people begin to compete to have a man with high knowledge. After understanding this, different organizations begin to establish different training centers, colleges, and/or universities.

Especially at this very era, having knowledge is having all things.

Such organizations and/or institutions are winners of both comparative advantages and competitive advantages. Once we say this much about what is knowledge wealth and to what extent it is useful today, let me come to designing a formula to compute annual wealth amount of nations particularly in Ethiopian context. Other countries may customize this formula to their own context and situations. To do so, it is very important to exhaustively list factor that accelerate and/or decelerate knowledge wealth of a given nations. Some basic factors that can put significant impact on the knowledge wealth of a given nation are:

A. child birth rat
B. child death rate
C. Children who Join School
D. average drop rate at elementary school
E. average drop rate at secondary school average drop rate at college and university level
F. Estimated population of the respective year.

5. Scope of the Analysis

For the purpose of this study, I take in to consideration only formal scientific knowledge. Almost all knowledge workers were taken in to consideration.

Knowledge worker here means those people who have at least a college certificate to do something scientifically (Peter Drucker, 1776). Moreover, many international nations are building enormous numbers of universities and majority of people are on the way of having there BA degree. Therefore, here also I take in to consideration knowledge workers who have BA degree and above it.

The basic objectives here are:

$\mathrm{TCB} = TP(BR)$

$\mathrm{TCD} = TP(DR)$

$\mathrm{SJS} = TP(BR - DR)$

$\mathrm{SJU} = [TP(BR - DR)] - P(BR - DR)DR$

SJS= $TP(BR - DR)[1 - DR]$

TGS= $TP(BR - DR)[1 - DR]$-ADR

KW= [$TP(BR - DR)[1 - DR]$-ADR]

Remark

- This formula works only for undergraduate knowledge workers
- TCB=Total Children born
- TCD=Total Children die
- TCB=Total Children born
- SJS= Students who Join School
- SJU=Students who Join School
- ADR= Average Drop rate

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