Research Framework

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Research Framework: Theory and Concepts
• www.vivafrica.net

Use the class website WEEKLY, ask/comment on the articles, and JOIN the FACEBOOK

Please Add your name and the course code
Learning Objectives

• This session introduces students to research frameworks. It covers the differences between theoretical and conceptual frameworks and also explains the basics of hypotheses. Research Framework presents the way of studying variables/concepts concerning a phenomena in order to find/investigate the solution for the research problem. It outlines the relationships between the variables/concepts in manner which explains or predicts a social phenomena within a specific research problem.

Finding theories
• Literature
• Database of Theories: www.tinyurl.com/researchtheories
• Ask your academic supervisor/lecturer
Research Framework: Theory and Concepts

Creswell (2008) Research Design – Quantitative, Qualitative and Mixed Methods, Sage


Bhattacherjee, Anol (2012) Social Science Research: Principles, Methods, And Practices, Global Text Project
Research Profiles of Lecturers in Business

- www.tinyurl.com/ugbslecturers
Research Framework

– Forms part of the literature review
– An outcome of the literature review which provides direction for data collection and analysis
Structure of Long Essay

• Abstract
• Chapt. 1 – Introduction
• Chapt. 2 – Literature Review
• Chapt. 3 – Context of the Study
• Chapt. 4 – Research Methodology
• Chapt. 5 – Results and Discussion
• Chapt. 6 – Conclusion
Research Framework

• Presents the way of **studying variables/concepts** concerning a phenomena in order to **find/investigate the solution** for the research problem

• It outlines the relationships between the **variables/concepts** in manner which **explains or predicts** a social phenomena within a specific research problem

Research FRAMEWORK

• It is called a research framework because it FRAMES the Research
• Outlines relationships = how concepts or variables relate to explain or predict a particular social phenomena
Research Framework – exists in a form… of

• **Theory**
  – Theoretical framework
    • Hypotheses
    • Mathematical model

• **Conceptual**
  – Factor/Concept based-model (no specific theory)
    • Literature review
    • Hypotheses (may propose) or mathematical model
  – Factor/Concept based-model (revised a theory to test)
    • Modified from a theory or a number of theories
    • Hypotheses (may propose) or mathematical model
Theory

• “A coherent set of general propositions used as principles of explanation, understanding and/or prediction of the apparent relationships of certain observed phenomena”.

• Has been empirically tested & verified
• can be shown as schematic diagram or mathematical equation

Research Framework (theoretical)

Theory of Planned Behaviour
(Azjen, 1991)
Theory as a mathematical equation

the Theory of Reasoned Action can be expressed as the following equation:

\[ BI = (AB)W_1 + (SN)W_2 \]

- \( BI \) = behavioral intention
- \( AB \) = one's attitude toward performing the behavior
- \( W \) = empirically derived weights
- \( SN \) = one's subjective norm related to performing the behavior

Defining Theory

• A theory is an organised, coherent, and systematic articulation of a set of issues that are communicated as a meaningful whole.

• Theories provide complex and comprehensive conceptual understandings of things that cannot be pinned down: how societies work, how organizations operate, why people interact in certain ways.

Use of Theories

• used to help design a research question,
• guide the selection of relevant data,
• interpret the data, and
• propose explanations of causes or influences.

How are theories generated?

• **Approach 1** - build theories inductively based on observed patterns of events or behaviors. Such approach is often called “grounded theory building”, because the theory is grounded in empirical observations.

• **Approach 2** - build a follow a bottom-up conceptual analysis of different sets of predictors potentially relevant to the target phenomenon using a predefined framework. This is also an inductive approach that may be based on empirical observations and/or prior knowledge, and relies heavily on the inductive abilities of the researcher.

Bhattacherjee, Anol (2012) Social Science Research: Principles, Methods, And Practices, Global Text Project
How are theories generated?

• **Approach 3** - extend or modify existing theories to explain a new context, such as by extending theories of individual learning to explain organizational learning. This deductive approach is an efficient way of building new theories by building on existing ones.

• **Approach 4** - apply existing theories in entirely new contexts by drawing upon the structural similarities between the two contexts. This approach relies on reasoning by analogy, and is probably the most creative way of theorizing using a deductive approach.

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Building Blocks of A Theory

• **Constructs** are abstract concepts specified at a high level of abstraction that are chosen specifically to explain the phenomenon of interest.

• **Propositions** are associations postulated between constructs based on deductive logic. The empirical formulation of propositions, stated as relationships between variables, is called **hypotheses**.

• **Logic** acts like a “glue” that connects the theoretical constructs and provides meaning and relevance to the relationships between these constructs.

• All theories are constrained by **Assumptions** about values, time, and space, and **boundary conditions** that govern where the theory can be applied and where it cannot be applied.

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Attributes of a Good Theory

• **Logical consistency**: Are the theoretical constructs, propositions, boundary conditions, and assumptions logically consistent with each other? If some of these “building blocks” of a theory are inconsistent with each other (e.g., a theory assumes rationality, but some constructs represent non-rational concepts), then the theory is a poor theory.

• **Explanatory power**: How much does a given theory explain (or predict) reality? Good theories obviously explain the target phenomenon better than rival theories.
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Attributes of a Good Theory

- **Falsifiability**: Falsifiability ensures that the theory is potentially disprovable, if empirical data does not match with theoretical propositions, which allows for their empirical testing by researchers. In other words, theories cannot be theories unless they can be empirically testable.

- **Parsimony**: Parsimony examines how much of a phenomenon is explained with how few variables. Simplest theory - one that uses the smallest number of variables or makes the fewest assumptions) is the best. Parsimonious theories have higher degrees of freedom, which allow them to be more easily generalized to other contexts, settings, and populations.

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Use of Theories

• In general, theories in the **natural sciences** are used to **generate predictions** about the relation between two or more different **variables** in order to generate universal laws.

• In contrast, social scientists assume that social reality is **too complex** to **consider variables** in isolation in order to test their causal relationship.

Use of Theories

• In addition, social scientists view universal laws as being unable to explain the complex interrelated functions of societies, thus making it impossible to draw on evidence for prediction.

• So, for social scientists, a theory is a conceptual tool useful in making sense of a complex social reality.

Use of Theory

In **quantitative research**, researchers often **test theories** as an **explanation** for answers to their questions. In a quantitative dissertation, an entire section of a research proposal might be devoted to presenting the **theory** for the study.

In qualitative research, the use of theory is much more varied. The inquirer may **generate a theory** as the **final outcome** of a study and place it at the end of a project, such as in grounded theory. In other qualitative studies, it comes at the **beginning** and **provides a lens that shapes** what is **looked at** and the **questions** asked, such as in ethnographies or in advocacy research.

Creswell (2008) Research Design
Use of Theory

• In **mixed methods research**, researchers may both test theories and generate them. Moreover, **mixed methods research may contain a theoretical lens**, such as a focus on feminist, racial, or class issues, that guides the entire study.

Creswell (2008) Research Design
Time Value of Theories

• Theories have been developed and modified over several hundred years and have dialectically informed each other’s changes over time.
  – Delone and Mclean IS Success Model (1992)
  – Updated Delone and Mclean IS Success Model (2003)
  – TAM / TAM2
  – Theory of Planned Behavior (TPB) and Decomposed TPB

Level of Theory

• Micro-level Theory
  – Not abstract
  – Deals with Small slices of time, space, or numbers of people
  – “Physician attire affects doctor-patient interaction”

• Meso-level Theory
  – Works at the meso-level
  – Theories of organizations, social movements and communities
  – Resource-Based Theory of the Firm

• Macro-Level Theory
  – Macro-level explain larger aggregates such as social institutions and cultural societies, whole societies…
  – Modernization theory
## Level of Theory

<table>
<thead>
<tr>
<th>Type of theory</th>
<th>Focus</th>
<th>Psychological domain (psychodynamic orientation)</th>
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<td>Grand theory</td>
<td>Universal, societal level theories</td>
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    • Modified from a theory or a number of theories
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Factor-based model (Conceptual – literature review)

- Political Instability
- Lack of start-up capital
- High Interest Rates
- Low wages

Factors which contribute or cause Unemployment (Literature Review)
Research Framework (conceptual)

Modified from Theory of Planned Behaviour (Azjen, 1991)
Conceptual Framework

• Are analytical schemes
• Simplify reality to make it easier to discuss, analyze or research
• Simplify reality by selecting certain phenomena/variables and suggesting certain relationships between them;

Conceptual Framework: **CAUSE AND EFFECT**

- Cause and effect conceptual frameworks identify the various factors which affect a phenomena
- They are often the basis of hypothesis type of research. The arrows are converted into series of hypothesis

Factors which contribute or cause Unemployment
(Literature Review)
Conceptual Framework: **Stages in a process**

- Process-based conceptual frameworks show how concepts are related in process which has stages/phases and lead to an outcome.
- The sequence can be linear or cyclical process.
Research Framework (Conceptual – no theory)
Research Framework (Conceptual – no theory)

Figure 1: Conceptual framework of the impact of mobile phones on micro-trading

Source: Boateng (2011)
Conceptual Framework: **Hierarchical relationships**

- Hierarchy-based conceptual frameworks show how concepts are related in higher or lower positions on a scale.
- The higher concept or factor has to be at the apex and lower at the base of the hierarchy.

Conceptual Framework: **Maps and Coordinates**

- Map-based conceptual frameworks show how concepts are related through vertical and horizontal scales of a map. Most common are two scale maps.
- In a two-by-two matrix, or table each scale or axis is divided into two.

SECI Model

Source: Nonaka & Takeuchi (1995)
Stakeholders and Communication Priorities

**Keep Satisfied**
- Host institutions (GTUC)
- Partner organizations

**Key Players**
- Major funders (OGCBP, World Bank)
- Government agencies
- Development partners
- Industry members
- The media

**Monitor & Educate**
- Wider general public
- International media

**Keep Informed**
- Academic institutions
- Research institutions
- Embassies
- NGOs/CSOs

Significant Role in the Formation of the Centre

Interest in the Centre
Conceptual Framework: Force-Field Diagram or Pairs of opposites

- Force-Field Diagram conceptual frameworks show the duality between concepts. They demonstrate the competing forces which can bring about a change in social phenomena.

![Diagram showing driving and restraining forces](image_url)

- **Driving Forces**
  - Competitive opportunity
  - New Employees
  - Stakeholder pressure

- **Restraining Forces**
  - Lack of resources
  - Manager attitude
  - Low awareness of environment

Conceptual Framework: **Gap Analysis**

- Gap-based conceptual frameworks use concepts to expose gaps in the phenomena which need to be addressed.
- Gaps may show a discrepancy or failure in the phenomena.

ITPOSMO Dimensions of Change

For Example: SERVQUAL

- SERVQUAL is a multi-item scale developed to assess customer perceptions of service quality (Parasuraman et. al., 1988).

- The scale decomposes the notion of service quality into five constructs as follows:
  - **Tangibles** - physical facilities, equipment, staff appearance, etc.
  - **Reliability** - ability to perform service dependably and accurately
  - **Responsiveness** - willingness to help and respond to customer need
  - **Assurance** - ability of staff to inspire confidence and trust
  - **Empathy** - the extent to which caring individualized service is given

SERVQUAL represents service quality as the discrepancy between a customer’s expectations for a service offering and the customer’s perceptions of the service received, requiring respondents to answer questions about both their expectations and their perceptions (Parasuraman et. al., 1988).

Conceptual Framework: **Similarities**

- Similarity-based conceptual frameworks show how concepts are related in similar themes and how they affect the phenomena.
- Eg. Mckinsey ‘7’ s Model for evaluating the effectiveness of an organization.

Where can we find theories

• Literature
• Database of Theories
  – www.tinyurl.com/businessstheory
  – www.tinyurl.com/financetheories
• Ask Academic supervisors/lecturers
Theories in Information Systems and Management

- www.tinyurl.com/businessstheory
- IS theories originate from social science and other disciplines
- It draws on diversity of perspectives to create models and frameworks
  - Technology Acceptance Frameworks
  - Managerial or Behavioural Frameworks
  - Environmental Frameworks
  - Interactionist Frameworks
  - Strategy Based Frameworks
  - Organizational Learning Theories
  - Impact Assessment Frameworks
Diffusion of Innovation

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system:

- **Knowledge** – person becomes aware of an innovation and has some idea of how it functions,
- **Persuasion** – person forms a favorable or unfavorable attitude toward the innovation,
- **Decision** – a choice to adopt or reject the innovation,
- **Implementation** – person puts an innovation into use,
- **Confirmation** – person evaluates the results of an innovation-decision already made.

Diffusion of Innovation

Percentage of Adopters

- Innovators: 2.5%
- Early Adopters: 13.5%
- Early Majority: 34%
- Late Majority: 34%
- Laggards: 16%

Adopters' categories based on innovativeness.
Diffusion of Innovation

According to DOI (Rogers, 1983), the key influences of user acceptance behaviour are relative advantage, complexity, compatibility, trialability, and observability.

1. **relative advantage** (the degree to which it is perceived to be better than what it supersedes);
2. **compatibility** (consistency with existing values, past experiences and needs);
3. **complexity** (difficulty of understanding and use);
4. **trialability** (the degree to which it can be experimented with on a limited basis);
5. **observability** (the visibility of its results).

- Research has, however, consistently found that **technical compatibility, technical complexity, and relative advantage (perceived need)** are important antecedents to the adoption of innovations leading to this generalized DOI model.

Diffusion of Innovation

- Technical Compatibility
- Technical Complexity (Ease of Use)
- Relative Advantage (Perceived Need)

IS Implementation Success (Adoption, Infusion)

Sources: Agarwal and Prasad (1998), Cooper and Zmud (1990), Crum et. al. (1996)
Technology Acceptance Model (TAM)

- According to TAM, the acceptance level of any technology is fundamentally affected by the user perception of ease of use and usefulness. TAM purports with empirical evidence that, increasing the perceived ease of use (PEOU) of a technology will increase its perceived usefulness (PU) and translate into an increased behaviour intention (BI), thereby resulting in a higher margin of Technology Acceptance.

- Thus, PU is relatively not enough for adoption or usage, the adopter or user must also have a positive attitude toward it.
Technology Acceptance Model (TAM)

• However, other research (Davis et al., 1989; Chau, 1996) also assert that the “influences of PEOU on PU diminish over time, as users become proficient with the target system”.

More recent versions have dropped attitude (see Venkatesh et al., 2003)

Technology Acceptance Model (TAM)

Conceptual Model for M-commerce Adoption and Usage by Traders

Adopter/User:

- Adoption (BI)
  - Why Adopt

Knowledge of Mobile Technologies:

- Perceived Ease of Use
  - Ease of Use of Mobile and Related Services

- Perceived Usefulness
  - Cost
  - Communication
  - Convenience

Extent of Usage:

- What are they using for?
  - Pre-Trade Information
  - During Trade Information
  - Post-Trade Information

Actual Benefits Obtained and Impact:

- Cost, Communication, and Convenience. Impact relate to Removal of Information Asymmetries and Intermediaries

Key:

- Solid line: Influence
- Dashed line: Partly Influence
Theory of Planned Behaviour (TPB)

• TPB hypothesise that “behaviour is influenced by an individual’s intention to perform to the behaviour in question”.

• These factors that determine intention are the individual’s attitude toward the behaviour (A), the subjective norm (SN) and perceived behaviour control (PBC).
  
  – **Attitude** towards a behaviour refer to “the degree to which a person has favourable or unfavourable evaluation of the behaviour of the question”.
  
  – **Subjective norm** refers to “the perceived social pressure to perform or not to perform the behaviour”. – Societal/Industry norms and Peer norms/pressure.
  
  – PBC refers to the individual’s perceptions on the fact that there exist “personal and situational impediments to the performance of the behaviour” (lack of technological and financial readiness)

• In effect, a manager’s intention to adopt e-commerce would therefore be stronger if there is a more favourable the attitude (perceived strategic value) and subjective norm (external pressure) with respect to the behaviour, and a greater perceived behavioural control (organisational readiness)
Research Framework (theoretical)

Theory of Planned Behaviour
(Azjen, 1991)

Managerial or Behavioural Frameworks
Theory as a mathematical equation

the Theory of Reasoned Action can be expressed as the following equation:

- $BI=(AB)W_1 + (SN)W_2$

- $BI =$ behavioral intention
- $AB =$ one's attitude toward performing the behavior
- $W =$ empirically derived weights
- $SN =$ one's subjective norm related to performing the behavior

Theories in Management (motivation)

- **Herzberg**
  - Frederick Herzberg (1923-) had close links with Maslow and believed in a two-factor theory of motivation. He argued that there were certain factors that a business could introduce that would directly motivate employees to work harder (**Motivators**). However there were also factors that would de-motivate an employee if not present but would not in themselves actually motivate employees to work harder (**Hygienefactors**)
  - **Motivators** are more concerned with the actual job itself. For instance how interesting the work is and how much opportunity it gives for extra responsibility, recognition and promotion. **Hygiene factors** are factors which ‘surround the job’ rather than the job itself. For example a worker will only turn up to work if a business has provided a reasonable level of pay and safe working conditions but these factors will not make him work harder at his job once he is there.

Managerial or Behavioural Frameworks

http://tutor2u.net/business/gcse/people_motivation_theories.htm
Theories in Management (motivation)

• Herzberg
  • Herzberg believed that businesses should motivate employees by adopting a democratic approach to management and by improving the nature and content of the actual job through certain methods. Some of the methods managers could use to achieve this are:

• Job enlargement, Job enrichment and Empowerment

http://tutor2u.net/business/gcse/people_motivation_theories.htm
Theories in Management (motivation)

- **Maslow**
- Abraham Maslow (1908 – 1970) along with Frederick Herzberg (1923-) introduced the **Neo-Human Relations School** in the 1950’s, which focused on the psychological needs of employees. Maslow put forward a theory that there are five levels of human needs which employees need to have fulfilled at work.

A business should therefore offer different incentives to workers in order to help them fulfill each need in turn and progress up the hierarchy. Managers should also recognise that workers are not all motivated in the same way and do not all move up the hierarchy at the same pace. They may therefore have to offer a slightly different set of incentives from worker to worker.


http://tutor2u.net/business/gcse/people_motivation_theories.htm
Maslow's Hierarchy Of Needs

Maslow (1954) stated that human motivation is based on people seeking fulfilment and change through personal growth.
Culture, Policy and Technology (CPT)

- **Culture** - the trust between parties in a transaction and the trust of the parties in the institutions of the economy and preferences for patterns of communication

- **Policy** – readiness of policy related to technology, trade, markets and legality of electronic documents, electronic signature and electronic transactions.

- **Technology** - the level of technological infrastructure and human resources of requisite skill and expertise.

Understanding these interrelationships tends to be critical in formulating technology solutions

Policy and technology can interrelate to influence culture when legislation is established for all e-commerce merchants to utilise safe technologies such as PayPal for transactions. The enforcement of this regulation with severe punishments can help reduce corruption and increase the level of trust.

**Bajaj and Leonard (2004)**
Hofstede’s National Cultural Dimensions

Hofstede conducted one of the most comprehensive studies of how values in the workplace are influenced by culture.

- **Power Distance (PDI)** - degree to which less powerful members of a society accept and expect that power is distributed unequally. High PDI more hierarchical.

- **Individualism versus Collectivism (IDV)** - individuals are expected to take care of themselves and their immediate families only. Collectivism is opposite.

- **Masculinity versus Femininity (MAS)** - Masculine Society at large is more competitive - achievement oriented, assertiveness. Society at large is more consensus-oriented - femininity, modesty.

- **Uncertainty Avoidance (UAI)** - The uncertainty avoidance dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity.

(Hofstede, 1985, 1991)
Technology-Organisation-Environment (TOE)

- developed by Tornatzky and Fleischer (1990) as a comprehensive framework for identifying the factors of innovation adoption.
- The technological context refers to the *internal and external technologies* that are relevant to firm in facilitating its business processes and creating value.
- Organisational context refers to the *organisational perspective* including formalisation and complexity of management structure; availability of requisite human resources; and the slack resources available to the firm internally.
- The environmental context refers to the *external context in which the firm operates*. Influences from this context include pressure from competitors and social referents, accessibility and readiness of resources provided by the institutional foundations including regulatory policies, economic and technological infrastructure.

Technology-Organisation-Environment (TOE)

Environmental context

Technological innovation decision making

Organizational context

Technological context

## Technology-Organisation-Environment (TOE)

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<thead>
<tr>
<th>Organizational Context</th>
<th>Environmental Context</th>
<th>Technological Context</th>
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<tbody>
<tr>
<td>Structural Factors</td>
<td>Market Driven Factors</td>
<td>Innovation Attributes</td>
</tr>
<tr>
<td>b. Formalization</td>
<td>b. Industry Maturity</td>
<td>b. Compatibility</td>
</tr>
<tr>
<td>Operational Needs</td>
<td>Inter-Organizational Relations</td>
<td>d. Trialability</td>
</tr>
<tr>
<td>a. Task Complexity</td>
<td>a. Pressure From Trading</td>
<td>e. Observability</td>
</tr>
<tr>
<td>b. Satisfaction With Existing Systems</td>
<td>Partners</td>
<td></td>
</tr>
<tr>
<td>c. Technological and Financial Resources In The Firm</td>
<td>b. Trust Between Trading Partners</td>
<td></td>
</tr>
<tr>
<td>d. Information Intensity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Resources</td>
<td>Cultural Factors</td>
<td>Cost-Benefit Considerations</td>
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<td>a. Adequate Education</td>
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<td>b. Employees’ IS Knowledge</td>
<td>b. Patterns of</td>
<td>b. Perceived Obstacles And Risks</td>
</tr>
<tr>
<td>c. Employees’ Positive Attitudes Toward Change</td>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td>d. Top Management Support</td>
<td>c. Trust between people</td>
<td>c. Degree Of Switching Costs</td>
</tr>
<tr>
<td>e. Innovation Champions</td>
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**Interactionist Frameworks**
Perceived E-Readiness Model (PERM)

Molla and Licker (2005) developed the Perceived E-Readiness Model (PERM) as a “multi-perspective audit of managerial, internal organisation and external contextual issues” which provides meaningful predictors of e-commerce adoption (p. 879).

- The model consists of two constructs – *Perceived Organisational E-Readiness (POER) and Perceived External E-Readiness (PEER)*.
- **POER** consist of technological imperative attributes (organisation’s perception, comprehension and projection of e-commerce and its potential benefits); managerial imperative attributes (managerial commitment); and key organisational imperative attributes (organisational resources, processes and business infrastructure).
- **PEER** refers to environmental imperative factors: the organisation’s assessment and evaluation of its external environment factors (Molla and Licker, 2005b: 879). The authors argue that the constructs are to be used in predicting and explaining discriminating factors of e-commerce adoption.
Examining Business Competitiveness
By RESOURCE-BASED MODEL
Resource-Based Theory

Assets and Capabilities for detecting and responding to market opportunities and threats (Wade and Hulland, 2004)

**Assets** are considered as anything tangible or intangible which a firm uses in its processes for creating, producing, and/or offering its products (goods or services) to a market, whereas capabilities are repeatable patterns of actions in the use of assets to create, produce, and/or offer products to a market (Sanchez et al. 1996 cited in Wade & Hulland 2004, p. 109).

- heterogeneous and immobile – valuable, rare, imperfectly imitable and not strategically substitutable (Barney 1991)

Resource-Based Theory

Resource Attributes and Firm Performance

Resources → Heterogeneous → Immobile → Sustained Firm Performance

Firm assets and capabilities should have these attributes to be considered as resources:

1. Valuable
2. Rare
3. Imperfectly imitable
   a) Historical conditions
   b) Causal ambiguity
   c) Social complexity
4. Not strategically substitutable

Strategy Frameworks
Dynamic Capabilities Model

An understanding of how firms develop and renew their resources to be congruent to their rapidly changing environments. The understanding of how resources, specifically capabilities, evolve through a set of possible paths is theoretically characterised by the capability lifecycle (Helfat and Peteraf, 2003: 1000).

![Capability (or Resource Development) Lifecycle](image)

- **Founding Stage**: Identify current firm resources (capabilities and assets) needed to develop new resource
- **Developing Stage**: Develop resource through coordination, learning, and reconfiguration
- **Maturity Stage**: Exercise the resource to make it more tacit in nature and imperfectly mobile

Source: Helfat and Peteraf (2003) and Teece et al. (1997)
Examining Business Competitiveness
By PORTER’S COMPETITIVE FORCES MODEL
Why do some firms become leaders within their industry?

- Provides general view of firm, its competitors, and environment
- Five competitive forces shape fate of firm
  - Traditional competitors/Intensity of rivalry
  - New market entrants
  - Substitute products and services
  - Customers
  - Suppliers

Porter’s competitive forces model

Strategy Frameworks
In Porter’s competitive forces model, the strategic position of the firm and its strategies are determined not only by competition with its traditional direct competitors but also by four forces in the industry’s environment: new market entrants, substitute products, customers, and suppliers.
Using Information Systems to Achieve Competitive Advantage

• **Traditional competitors**
  • All firms share market space with competitors who are continuously devising new products, services, efficiencies, switching costs

• **New market entrants**
  • Some industries have high barriers to entry, e.g. mobile network operators – in telecom industry
  • New companies have new equipment, younger workers, but little brand recognition
Porter’s Competitive Forces Model

- Substitute products and services
  - Substitutes customers might use if your prices become too high, e.g. KASAPREKO

Beware of fake herbal drinks – ADJEI

Nigerian consumers have been warned to be mindful what they ingest so as to avoid the risk of taking in fake herbal products that could be harmful to their health.

Dr. Kwabena Adjei, who is Chairman and President of Kasapreko – a Ghana based manufacturers of alcoholic and non-alcoholic drinks, noted during a media chat organised by Courier Master International, that the spate of ill health arising from ingestion of spurious health preparations being sold on the open market.

Adjei, who was in Nigeria for the first time warned in Lagos that it was necessary to get the right herbs in order to protect the body. “I heard that here the problem of imitation and faking is high just as it is in Ghana where people who drink some imitated products, got crippled, one went blind while others died.”
Porter’s Competitive Forces Model

- **Customers**
  - Can customers easily switch to competitor’s products? Can they force businesses to compete on price alone in transparent marketplace?

<table>
<thead>
<tr>
<th>Retailer</th>
<th>Retailer message</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>electrocentre</td>
<td>Dst 1979. Huge range of products at affordable prices with a rapid delivery. Best service. Full UK warranty.</td>
<td>£ 1,829.00</td>
</tr>
<tr>
<td>1staudiovisual</td>
<td>Online prices with high street care. Free and next day delivery services 0% finance plus 14 day peace of mind money back guarantee.</td>
<td>£ 1,990.00</td>
</tr>
<tr>
<td>amazon.co.uk</td>
<td>New, used, refurbished and collectable products at great prices, safely and securely from third parties, at Amazon.co.uk.</td>
<td>£ 2,210.00</td>
</tr>
</tbody>
</table>
• Rivalry between Competitors

After just three days of deliberation, the jury in the Apple v. Samsung patent-infringement has handed Apple a big win, finding Samsung guilty of infringing on a number of Apple patents, and recommending that Apple be awarded $1.05 billion in damages.

The jury found that the majority of Samsung smartphones and tablets violated patents held by Apple. It included features such as one that allows a user to tap their screen to zoom in and out of an image, and a scrolling "bounce back" feature.

Apple's competitors have already begun to change their new products to protect themselves.

By JOANNA STERN (@joannastern)
Aug. 24, 2012
Porter’s Competitive Forces Model

- Four generic strategies for dealing with competitive forces, enabled by using IT
  - Low-cost leadership
  - Product differentiation
  - Focus on market niche
  - Strengthen customer and supplier intimacy
Impact of Internet on Competitive Forces

1. Reduces barriers to entry
2. Enables new substitute products and services
3. Shifts bargaining power to customer
4. Raises firm’s bargaining power over suppliers
5. Suppliers benefit from reduced barriers to entry and from elimination of intermediaries
6. Widens geographic market, increases number of competitors, reduces differentiation among competitors
Examining Business Competitiveness
By VALUE CHAIN MODEL
Using Information Systems to Achieve Competitive Advantage

• **Business value chain model**
  • Views firm as series of activities that add value to products or services
  • Highlights activities where competitive strategies can best be applied
    • Primary activities vs. support activities
  • At each stage, determine how information systems can improve operational efficiency and improve customer and supplier intimacy
The Value Chain Model

This figure provides examples of systems for both primary and support activities of a firm and of its value partners that can add a margin of value to a firm’s products or services.
TECHNOLOGY IMPACT FRAMEWORKS
**ICT and Commerce Benefits Model**

- **Operational benefits** are associated with the reduction in coordination and search costs in delivery of products, goods and services in the market place. Improved timeliness and efficiency.

- **Relational benefits** are associated to the benefits of improved communication and relationships between actors – buyers, customers, sellers and suppliers – involved in a transaction which is conducted through ICTs. Distintermediation – direct communication.

- **Strategic benefits** are associated with benefits which increase the market “reach” (access new markets) and the commitment and performance of actors involved in a transaction which is conducted through ICTs. Deepening of relationships, customer loyalty and retention.

ICT and Commerce Benefits Model

**Incremental** effects characterize benefits from using mobile phones to improve what traders already do. These include the communication and information exchange with customers and trading partners through use of voice calls and text messages.

**Transformational** effects characterize benefits from using mobile phones to create something new – opportunities and access to services and support which were not previously available or readily accessible. These effects include the use of mobile phones to access new services such as mobile banking, mobile advertising, mobile Internet and other related location-based services.

**Production** effects characterize benefits from not using mobile phones but trading or selling mobile phones and related services. Production effects may also contribute to transformational effects in the livelihoods of micro-entrepreneurs or retailers engaged in production activities.

Research Framework (Conceptual – no theory)

Source: Boateng (2011)
Delone and Mclean IS Success Model

- DeLone and McLean reviewed the existing definitions of IS success and their corresponding measures, and classified them into six major categories. Thus, they created a multidimensional measuring model with interdependencies between the different success categories (DeLone & McLean 1992, 2002, 2003).
  - information, system and service quality, (intention to) use, user satisfaction, and net benefits.
- A system can be evaluated in terms of information, system, and service quality; these characteristics affect the subsequent use or intention to use and user satisfaction. As a result of using the system, certain benefits will be achieved. The net benefits will (positively or negatively) influence user satisfaction and the further use of the information system.
Delone and Mclean IS Success Model

DeLone & McLean (2002); DeLone & McLean (2003)
Other Impact Assessment Models

• A whole review of ICT4D Impact assessment models were done by Heeks and Molla (2009)
• Download at: www.tinyurl.com/ictimpact

• Reviews over 15 frameworks and advises on how to use them for data collection and analysis
Other IS and Social Theories of Importance

1. Structuration Theory
2. Task-technology fit
3. Theory of Technology dominance
4. Unified theory of acceptance and use of technology
5. Stakeholder Theory
6. Actor-Network Theory
7. Strategic Choice Theory
8. Internationalization Theory
9. Institutional Theory

– Visit www.tinyurl.com/businessstheory
Theories in Marketing

Hierarchy-Of-Effects Theory:
A series of steps a consumer goes through in which they receive and use information in order to reach a decision about which actions to take, for example, whether or not to purchase a product.

A hierarchical representation of how advertising influences a consumer's decision to purchase or not purchase a product or service over time.

Read more: http://www.investopedia.com/terms/h/hierarchy-of-effectstheory.asp#ixzz26qBdREsi
SERVQUAL

- SERVQUAL is a multi-item scale developed to assess customer perceptions of service quality (Parasuraman et. al., 1988).

- The scale decomposes the notion of service quality into five constructs as follows:
  - **Tangibles** - physical facilities, equipment, staff appearance, etc.
  - **Reliability** - ability to perform service dependably and accurately
  - **Responsiveness** - willingness to help and respond to customer need
  - **Assurance** - ability of staff to inspire confidence and trust
  - **Empathy** - the extent to which caring individualized service is given

SERVQUAL represents service quality as the discrepancy between a customer’s expectations for a service offering and the customer’s perceptions of the service received, requiring respondents to answer questions about both their expectations and their perceptions (Parasuraman et. al., 1988).

Theories in Marketing (strategy)

- The **structure-conduct-performance model** attempts to explain "why some industries, on average, are more profitable than others."
- The **efficiency perspective** provides insights into "why some firms in an industry are more profitable than others."
- **Porter** Models provide insights into "how the structural characteristics of an industry and the competitive strategy pursued by a business jointly determine the performance of a business."
- The **resource-based view** of the firm attempts to explain superior firm/business performance in terms of firm-specific skills and resources that are rare, valuable, non-imitable, and characterized by absence of equivalent substitutes.
- **Institutional theory** suggests that the actions of firms and the outcomes of these actions are influenced by the knowledge systems, beliefs, and rules that characterize the context of the organization.

Theories in Marketing

• **Game Theory**
  - Game theory is a mathematical concept that analyzes how strategic interactions between individuals, or agents, produce outcomes based on the agents' choices. The agents may be assumed to have conflicting priorities.

• **Collective Intelligence**
  - The theory of collective intelligence holds that groups are smarter and more productive than the sum of their parts.

• **Generational Theory**
  - Generational marketing theory holds that consumers born of the same generation -- defined as a 20-year period -- have common attitudes and behaviors because of shared experiences that influenced their childhoods and shaped their views of the world.
    - Pew Internet reported in a 2010 study that millennials, who are 18 to 33 years old, are most likely to access the Internet wirelessly. Generation X, on the other hand, who are ages 34 to 45, are more active than millennials in such activities as researching financial information.

Theories in Marketing

• There are more marketing theories which are applicable to the specific area of study
  – Consumer behavior
  – Relationship marketing
  – Corporate social responsibility
  – Service marketing
  – entrepreneurship
Theories in Public Administration

• New Public Administration

• **New public management** (NPM) denotes broadly the government policies, since the 1980s, that aimed to modernise and render more effective the public sector.

• The basic hypothesis holds that *market oriented management* of the public sector will lead to greater cost-efficiency for governments, without having negative side-effects on other objectives and considerations.
Characteristics of NPM

- Customers (one-stop shops, case management)
- Decentralization
- Strategic planning and management
- Separation of provision and production
- Competition
- Performance measurement
- Changed management style
- Contracting out
- Freedom to manage (flexibility)
- Improved accounting
- Personnel management (incentives)
- User charges
- Separation of politics and administration
- Improved financial management
- More use of information technology

Budget cuts
Vouchers
Accountability for performance
Performance auditing
Privatization
Critique of NPM

• Critics like Dunleavy proclaim that NPM is 'dead' and argue that the cutting edge of change has moved on to digital era governance focusing on reintegrating concerns into government control, holistic (or joined-up) government and digitalization.

• In his book Bad Samaritans, economist Ha-Joon Chang claims that "increased NPM-inspired reforms have often increased, rather than reduced, corruption," as a result of "more contacts [of state-sector functionaries] with the private sector, creating new opportunities for bribes" and future, direct or indirect, employment in the private sector.[8]

Theories in Public Administration

• **Public Value Theory** - have re-asserted a focus on citizenship, networked governance and the role of public agencies in working with citizens to co-create public value, generate democratic authorisation, legitimacy and trust, and stress the domains within which public managers are working as complex adaptive systems with characteristics which are qualitatively different from simple market forms, or private sector business principles.

Structure of Long Essay

- Abstract
- Chapt. 1 – Introduction
- Chapt. 2 – Literature Review
- Chapt. 3 – Context of the Study
- Chapt. 4 – Research Methodology
- Chapt. 5 – Results and Discussion
- Chapt. 6 – Conclusion

Research Framework
Bibliography