

Significance of I*I for effective and economic processing of information for competitive advantage

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Information Integrity/Integrity Information System/Management Information System

Course Lecture # 5

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LECTURE # 5

Criticality of I*I for effective and economic processing of information for competitive advantage

PROLOGUE...1

- Lectures # (6-7) present first statement of I^*I , which is followed by definition of I^*I as the inverse amount of distortion and noise present.
 - I^*I is thus concerned with the *correctness* and *exactness* aspects of the information.
- Further, the lecture develops a simple economic argument showing that I^*I has become more important (in information systems) as the use of information technology has advanced.

PROLOGUE...2

- The current Lecture # 5 prepares the learner for the contents of Lectures # (6-7).
- Specifically, drawing on the case example of the examination system under the education system, Lecture # 5 establishes the criticality of I*I for effective and economic processing of information for competitive advantage.

CASE EXAMPLE OF AN EXAMINATION SYSTEM UNDER A EDUCATION SYSTEM

- For competitive business advantage, business process *IS view*, which is ridden with uncertainty and errors, must process information efficiently and economically. This makes Information Integrity a critical *IS* factor.
- To elaborate, consider any *IS*, say, an educational system and its sub-system, namely, an examination system. A common “measure” for a learner (candidate) performance is % marks providing a basis for *comparing* two or more candidates for their academic standing (specialization) so as to facilitate the candidate *selection* decision.

REQUIREMENT OF *USEFUL* INFORMATION IN *USABLE* FORM

- In order to function *easily* in the recruitment market, the recruiter (employer, i.e., the customer of educational institution products) requires a common denominator to work with: % marks obtained by the candidate (I1).
- Such *useful* (i.e., relevant) information is, indeed, expressed in a form that makes it particularly *usable* in the context of “candidate performance ranking mechanism for comparison and selection decision.”

A MEASURE (I1) MINIMIZING TRANSACTION AND SELECTION COSTS

- Thus, what is important is, the success of information “I” (% marks) as a medium of exchange and unit of measurement (measure) *is* in the fact that *it (information “I1”) minimizes transaction or comparing and selection costs.*

BOTTLENECK CHARACTER OF INFORMATION

- *This* efficiency and economy in the market information gathering (originating) and processing systems (so as to compare and select) that then provides the engine for both internal and external performance measuring systems based on concerned information “I1” getting emphasized as the market grows in complexity. (That is how efforts of all stake holders – students, institutions, employing agencies, etc. – emphasize examinations and marks *only*.)
- This explains the bottleneck character of the information (I1) used for the purpose.

IMPORTANCE OF INFORMATION IN RESOURCE ALLOCATION AT TWO LEVELS

- There is little more to the analysis being pursued. Increased importance of examination information is also accompanied by useful role this information plays in allocating resources (e.g., improved T-L production factors, improved theory and practice of examinations, etc.) at two levels.
- Specifically, efficient resource allocations in any product or factor market *require* competition.

INFORMATION I1, I2

- Competition requires, as necessary conditions at least two things:
 - (a) information (I2) about market imbalances (examination results' imbalances for different subjects, programs and educational institutions in this case) indicating improvement (business) opportunities, and
 - (b) information (I3) on working mechanisms (knowledge capital) for implementing improved T-L production factors and for improved implementation of examinations, to exploit opportunities.

INFORMATION EVALUATION COSTS

- For efficient processing of information, trade off *has* to be between:
 - costs associated with originating and processing of information and
 - loss due to incorrect information.
- The *IS* which, for a certain kind of information origination, processing, storage, distribution and discard, is able to arrange them (costs) at the lower level *will* tend to prevail.

INTEGRITY IMPERATIVE-1

- In view of this it follows that, *to compete successfully*, the information regarding:
 - (a) measure of candidate’s performance — the aggregate (I1),
 - (b) examination results’ imbalances — the opportunities (I2), and
 - (c) knowledge of working mechanisms for resource allocation, i. e., the knowledge capital (I3)*must* have “**integrity**”.

INTEGRITY IMPERATIVE-2

- In other words, each detail in each of these information statements (the measure, the opportunities and the knowledge capital), and not only the bottom line statements, must be accurate, consistent and reliable; as it is only through ensuing of optimal *integrity* that it is possible to achieve efficient and *economic* processing of information (in respect of examination results) in the recruitment market described above.

EPILOGUE-1

- The case of a recruitment *market*, candidate performance information statement in terms of % - marks- based examination *measure*, recruiter as its *recipient*, and education *system* comprising competing educational institutions, programs and subjects, as analyzed *here*, is *only* illustrative and incidental.

EPILOGUE-2

- The central point is if *IS* is to originate and process information efficiently and *economically*, that is if the decision process - that the *IS* is - is to deliver information decision as output *so that* recipient achieves maximum information *use* for the decision objective at hand (and this *IS must* do if it were to be competitive), then *it is fundamental that the information, which constitutes the bottleneck resource, is with integrity.*

EPILOGUE-3

- In other words, dependability and trustworthiness, i. e., Information Integrity is the critical factor in controlling the quantum and economy of originating and processing information for *use*, i. e., for strategic and competitive advantage in complex and changing business environment.

THANK YOU