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ARTICLES /CASES

1. INTEGRITY

Dr. Prasanna Chandra

The frequent scandals in the world of finance and their damaging effects on value and human welfare suggest that the current paradigm of financial economics is deficient in some ways. In their paper "Putting Integrity Into Finance: A Purely Positive Approach," Werner Erhard and Michael C. Jensen argue that adding integrity as a factor of production to the current paradigm of finance will enhance economic efficiency, productivity, and human welfare. As they put it, "Integrity as we define it (or the lack thereof) on the part of individuals or organizations has enormous implications for value, productivity, and quality of life. Indeed, integrity is a factor of production as important as labor, capital, and technology."

Integrity as a Positive Phenomenon

Since integrity is regarded as a normative phenomenon in the current economic paradigm, most economists dismiss it out- of- hand. Erhard and Jensen, however, look at integrity as a positive phenomenon. In their positive theory of integrity, integrity is defined as: "the state of being whole, complete, unbroken, unimpaired, sound, in perfect condition." In short, they refer to it as "whole and complete." So defined, it does not have any normative connotations. As they put it, "There is nothing inherently good or bad (that is, virtuous or otherwise normative) about the state of being whole, complete, unbroken, unimpaired, sound, in perfect condition. An object, system, person, or other human entity (such as a corporation) is just 'whole or complete' in this or that aspect or it isn't."

Erhard and Jensen define the integrity of an object or system as follows: "An *object or system* has integrity when it is whole or complete. An *object* without integrity doesn't work. Think of a wheel with missing spokes, it is not whole and complete, and therefore not stable. It will become out-of-round, work less and eventually stop working."

For a person or other human entity (family, group, organization, society, and nation), integrity is a matter of that person's or entity's *word*- nothing more and nothing less. According to Erhard and Jensen: "For the word of a person or other entity to be whole, complete, unbroken, sound, in perfect condition, they must keep their word, or when they will not be keeping their word, they must maintain their word as a whole, complete, etc. by honoring their word."

Webster's New world Dictionary (1998) defines integrity as follows:

1. the quality or state of being complete; unbroken condition; wholeness; entirety.

2. the quality or state of being unimpaired; perfect condition; soundness.
3. the quality or state of being of sound moral principle; uprightness, honesty, and sincerity.

A Picture of Integrity Erhard and Jensen summarise the picture of integrity as follows: “You have done what you said you would do, what you know to do, and what others expect you to do, or have said you are not doing it, or not doing it on time, and you have cleaned up the mess you have caused by not doing it at all or not doing it on time. In short, you have nothing hidden; you are truthful, forthright, straight, and honest.”

Relation between Integrity, Workability, Performance, and Value Maximization

The relation between integrity, workability, and performance is as follows:

1. Maximum workability is a necessary, but not a sufficient, condition for maximum performance.
2. Integrity is a necessary, but not a sufficient, condition for maximum workability.
3. Integrity is a necessary, but not a sufficient, condition for maximum performance.
4. As integrity declines, the opportunity for performance declines.
5. Ceteris paribus, as integrity declines performance declines.
6. Integrity is a necessary but not a sufficient condition for a long-run value maximization.

Out- of- Integrity Behaviour

Out- of- integrity behaviour is universally prevalent and it has a hugely damaging impact on human welfare. Surprisingly, it has gone largely unnoticed in the behavioural literature of the last three decades or so, although it is a significant portion of all counter- to- self- interest- behaviour. Erhard and Jensen argue that the actual damage from out- of—integrity behaviour is far more than what makes headlines because much of the damage is misidentified as being the product of something else.

According to the positive model of integrity developed by Erhard and Jensen:

1. Out- of- integrity behaviour is widespread.
2. Out- of – integrity behaviour inflicts enormous costs to people, groups, and organisations.
3. Our out- of- integrity behaviour does not occur to as out-of-integrity behaviour.
4. The damage caused by out- of- integrity behaviour is usually ascribed to some other cause.

Empirical Evidence

While no large- scale empirical studies of the impact of integrity on performance have been carried so far, Erhard and Jensen, have received regular feedback (solicited, unsolicited, and non-random) from thousands of attendees (students, top-level executives, consultants, and scholars) of their seminars, programmes, and courses on their positive model of integrity. What was the key message they received? As they put it, “...we have consistently received feedback that taking on integrity as a positive phenomenon has resulted in substantial increases in their personal power and quality of life, including personal well- being, quality of their family and professional lives, and personal and organizational performance.”

Steve Zaffron, the CEO of the consulting firm Vanto Group reports about the experiences of several Vanto Group clients. Here are some of them:

- Magna Copper Company in Tucson, Arizona, undertook a project to measure the company’s integrity by measuring “promises made and kept.” Using a computer programme, the employees of Magma reported each promise they made, without distinguishing between “large” promises or “small” promises. On a weekly basis they reported “promises kept” and “promises not kept.” This was done for the 3 years Vanto worked with them (until BHP, now BHP Billiton acquired them). Over the three- year period, the integrity statistic moved up from 65% to 80% and correlated with a significant improvement in productivity and cost reduction. When acquired by BHP, Magna Copper was valued at 3 times what they were valued when Vanto first started working with them.
- A large chain of petrol stations undertook a similar project by measuring “promises made,” “promises kept,” and ‘promises not kept,” over a two- year period. During this period, the company experienced an increase in customer satisfaction and a 58% jump in net profit.

At SSRN (the Social Science Research Network), where Michael Jensen is the Integrity Officer, a culture of integrity has produced major increases in productivity. As Erhard and Jensen report, “Bringing about increases in the integrity of SSRN’s staff as individuals (including himself) and in the integrity of SSRN both as an organizational system and as a human entity enabled increases in productivity at SSRN of 300% over the first three years of SSRN’s efforts in this domain. Interestingly those productivity increases have also been associated with substantial increases in the satisfaction and happiness of SSRN’s staff. SSRN has also

experienced large increases in productivity as ITX, SSRN's outside Vendor of web technology services.

Some Major Scandals in Finance

There have been a continuing stream of scandals in the financial sector in recent years, all involving out- of - integrity behaviour and have resulted in steep financial losses in the private sector, massive government bailouts, world- wide decline in business conditions, and deterioration in employment situation in many areas of the world. Here is a brief description of some of the major recent scandals.

Mis-selling of Mortgage Securities On August 22,2014 Scannel and Hall reported in the *Financial Times*, the following settlements that Bank of America and JP Morgan made with the U.S. Government relating to "mis-selling mortgage securities," foreclosure abuses, and repurchases of loans to the government: Bank of America (February 2012) \$11.8 billion, Bank of America (January 2013) \$11.6 billion, JP Morgan (November 2013) \$13.0 billion, Bank of America (March 2014) \$9.3 billion, Bank of America (August 2014) \$16.7 billion. Bank of America admitted of its repeated failure to disclose the poor quality of mortgages that were packaged and sold by it, and Countrywide and Merrill Lynch, both of which it acquired in 2008 during the financial crisis. The lack of integrity is evident.

Rigging of LIBOR In their book *The Fix*, Liam Vaughan and Gavin Finch provide the inside story of rigging the Libor, the 'world's most important number' and the basis for \$350 trillion of securities from mortgages to loans to derivatives. Thanks to the persistence of a rag- tag team of investigators from the U.S, the scandal was unearthed. Rabobank and several other banks paid more than \$10 billion to settle charges with regulators and law enforcement agencies, for conspiring to rig LIBOR. Tom Hayes, one of the culprits, revealed his motivation: "The first thing you think is where's the edge, where can I make a bit more money, how can I push, the boundaries. But the point is, you are greedy, you want every little bit of money that you can possibly get because, like I say, that is how you are judged, that is your performance metric."

The Bernard Madoff Ponzi Scheme Bernard Madoff admitted to his sons on December 10, 2008, that the asset management business of his firm was a Ponzi scheme. "On March 12, 2009, Madoff pleaded guilty to 11 federal crimes, including securities fraud, mail fraud, money laundering, perjury, and falsifying files with the SEC. Refusing to name accomplices, he claimed sole responsibility for the Ponzi scheme and defrauding his clients of \$65 billion. Former SEC Chairman Harvey Pitt estimated the actual net fraud to be between \$10 and \$17 billion. (Note this calculation does not

include the fictional returns Madoff credited to his customer accounts). Prosecutors identified \$13.b billion in losses in accounts opened since 1996” (Source: Jewish Virtual Library: Bernard Madoff).

2. THE DIAMOND MODEL FOR INFRASTRUCTURE PROJECTS

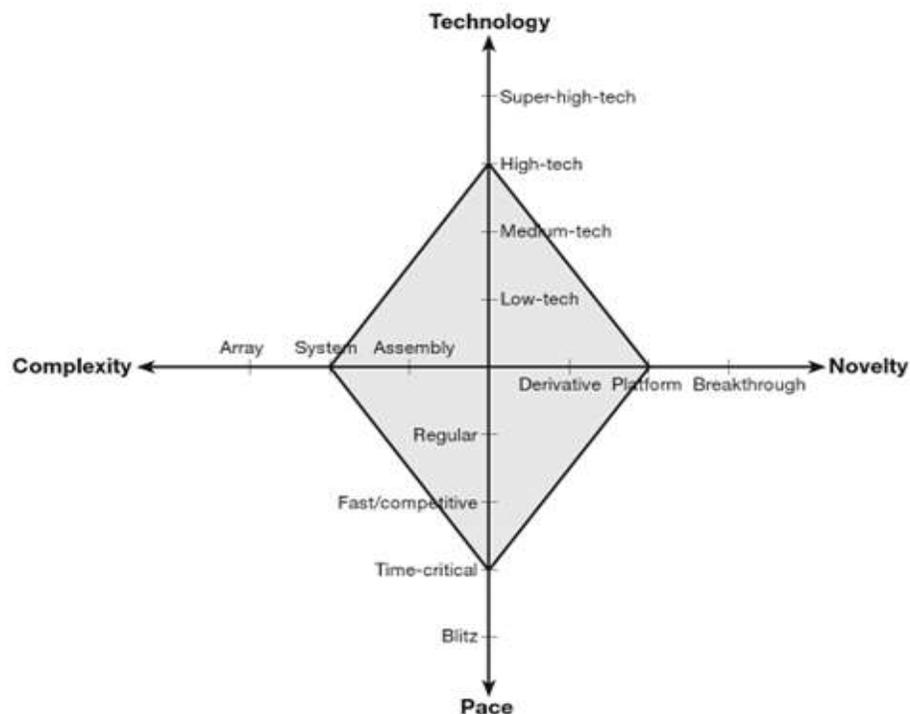
C.S. Balasubramaniam

Aaron J. Shenar & Dov Dvir of Harvard Business School have proposed the Diamond Model and they have tested the applicability of the model in a number of infrastructure projects in USA and across the globe. A Diamond –shaped framework is presented to distinguish and develop the project evaluation model based on four prime dimensions: novelty, technology, complexity and pace (NTCP). The diamond is designed to provide a disciplined tool for analyzing the expected benefits and risks of a typical infrastructure project and developing a set of rules /criteria and performance behaviours for each project type. If the project base and planning is addressed in a typical way, uniqueness of managerial styles for dealing with project implementation can be determined. The diamond analysis is also beneficial in assessing the project in midcourse, identifying possible gaps/deficiencies in a troubled project and selecting remedial actions to put the project back on track. Ultimately this approach will lead to common medium for discussion among top executives, managers, project financiers /bankers and users/customers during the project approval, contracting, and monitoring towards completion /maturity phases.

The four bases of the Diamond Approach are described as follows:

- **Novelty** – This base represents the uniqueness and uncertainty of the project’s goal, the uncertainty in the market/users or both. It measures how new the project’s product/services are to the customers /users or to the market in general and thus how clear and well defined the initial product /service requirements are. Novelty includes three types: derivative, platform, and breakthrough.
- **Technology** – This base represents the project’s level of technological uncertainty. It is determined by how much new technology is required. Technology includes four types: low tech, medium –tech, high-tech, and super high-tech.
- **Complexity** – This base measures the complexity of the product/service, the task and the project organization. Complexity includes three types ; assembly, system, and array (or system of systems)
- **Pace** – This base represents the urgency of the project – viz., how much time there is to complete the job. Pace includes four types : regular, fast/ competitive ,time critical, and blitz

The diamond model—assessing a project's risks and benefits and selecting the right management approach



Source: Aaron J. Shenar & Dov Dvir: Reinventing Project Management (2007)

Each dimension affects infrastructure project management in its own way. **Novelty** affects the time it should take to freeze the product /service requirements, accuracy and reliability of marketing/demand potential data. **Technology** affects how long it should take to get the design right and freeze it, the intensity of the technical skill /activities required to be provided by the project team. **Complexity** impacts the project organization and the level of bureaucracy, procedural clearances /bottlenecks and formality of the organizational bodies /governing /regulatory bodies needed to manage the implementation of the infrastructure project. **Pace** affects the planning and reviews in the projects undertaken, the autonomy of the project team and the involvement of top management, particularly in the most urgent projects.

3. BITCOINS AND BLOCKCHAINS

Venugopal Unni

Bitcoin is a cryptocurrency originated by one Satoshi Nakamoto (most probably a pseudonym) who announced the bitcoin protocol in 2009. Bitcoin transactions take place between the web addresses of the participants (without any reference to their

real identities) directly on a global peer to peer network without any intermediaries like banks and without any regulators like central banks or governments.

You can download a piece of software called bitcoin wallet software onto your computer to receive and send bitcoins over the network. Suppose you own 100 bitcoins and want to send 30 to your friend. You make out a message giving a digital reference to the source of your total 100 bitcoins, your friend's web address(which is also her public key), the amount you wish to pay viz.30 bitcoins and the balance due to you viz.69 bitcoins(the shortage of 1 bitcoin(say) is the transaction fee you wish to pay). To this you add your digital private key(careful: if this key is lost you will lose all your holdings for good!) and broadcast the digital message in a standard format to all the network nodes who make it a point to check the formats and reject invalid ones. Validation of the transactions is carried out in specific nodes of the network by people known as miners who are in pursuit of rewards.

In cryptography, a hash function plays the crucial role. Such a mathematical function converts any data into an output data of a fixed length called a digest. For instance, the gibberish sequence

e018345c20c10f029083efaed630e1e4b51dba1a7eaf6cbd9664bbe39bf1ab6d is obtained by hashing the data 'Enjoy reading CFM Journal' thro' a SHA256 hash function. While hashing is quite easy, it would be almost impossible to find another message that when hashed would result in an identical digest. A miner first compiles a message for sending the mining reward of 25 bitcoins (this is how the bitcoins are created out of nothing) to his own web address and adds to that all the valid unconfirmed bitcoin transactions floating around the network for the past ten minutes and creates a hashed digest called merkle root. A data sequence called a blockhead is then compiled beginning with the protocol version and followed respectively by the hash of the previous block in reverse, the merkle root, digital time stamp, a short string called nBits (which defines the stipulated computing difficulty target) and an arbitrary number (called nonce). The blockhead is then hashed to get a sequence of random binary numbers called proof of work. The proof of work should be such that it begins with a certain number of 0s (say 30) and its value is lower than the specified difficulty target. A right proof of work that satisfies the given conditions is achieved by repeatedly hashing the blockhead using different nonce numbers. Among the numerous competing miners in action, the first one who is able to get a 'right' nonce, gets the reward and transaction fees and the successfully hashed blockhead is added to the existing chain of blocks. The number of trials needed by a miner would be, on average, of the order of a few billions or trillions. If you toss 30 coins at a time, how many trials would it take to

get an outcome where all are heads up? The electricity consumed in computing is so costly that the miners are forced to form groups and share the rewards and transaction fees! The difficulty level is continually adjusted (almost always increased) to ensure that the time taken to add a new block is around ten minutes.

The blockchain is an open-sourced decentralised distributed digital ledger containing the history of every single bitcoin created from the inception of bitcoins and every network participant has access to its updated copy. There is an upper limit of 21 million bitcoins that can be created. The miner's reward (currently 25 bitcoins), which is an incentive to them to do the 'book keeping' work, is progressively halved once in about four years and it stops once the total bitcoins limit is reached. But by that time the number of participants in the network is expected to increase to such an extent that their transaction fees alone is expected to be sufficient to compensate for the efforts of the miners. The use of blockchains is not limited to just bitcoins. Quite a few large corporations have started to invest heavily into this technology with a view to make their contracts and property rights tamper-proof.

Bitcoins can be bought or sold against other currencies between persons, through select exchanges and ATMs. It is accepted in payment by some merchants. Its value has fluctuated widely in the past and is currently around \$600 per bitcoin. While the popularity of bitcoins is slowly increasing, regulators are keeping a strict watch on this currency as it can be a handy tool for shady interests like drug syndicates or arms dealers.

B.SNIPPETS

1. Brevity of Investment Careers

Most outstanding investment careers tend to be brief. While they are not as short as the careers of professional athletes, they are shorter than what they should be in an intellectual vocation. While they have enough winners, they have too many losers as well. Their approach may be characterised as follows:

- They bet overly when they think they have a winning idea, leading to concentrated portfolios rather than diversified portfolio.
- In attempting to time the market, they change their holdings too often and incur excessive transaction costs.
- They gear their portfolios for favourable scenarios and hoped – for outcomes and have inadequate protection against miscalculation or bad luck.

2. Similarities between Investing and Sports

As Howard Marks argues, there are a lot of similarities between investing and sports

- *Both are Competitive:* Some win and some lose and the distinction between the winners and the losers is clear.
- *Both are quantitative:* The results of investment and sports are expressed in quantitative terms
- *Both are meritocratic:* While luck plays a role in the short run, in the long run better investors and players have a superior track record.
- *Both are team oriented:* In sports, as well as investments, an effective group can achieve more than an individual.
- *Both are satisfying and enjoyable:* Investors as well sportspeople seem to enjoy the game, of course much more so when they win.

3. Complex Experiment

Ramachandra Guha, in his insightful book *Makers of Modern India*, argues that since achieving independence India has been undergoing the most complex experiment in the history of mankind. This experiment is characterised by five simultaneous shifts: from rural orientation to urban orientation; from agricultural orientation to industrial and service orientation; from local loyalty to a national identity; from monarchy to democracy; and from community and patriarchy driven behaviour to assertion of individual rights and power by the subjugated and deprived classes.

4. Family Businesses

Family businesses account for more than 30% of all companies with sales in excess of \$1 billion: According to a new study by BCG and E'cole Polytechnique, family companies do better public companies in terms of financial performance. This is because they focus on resilience, not short-term results. Family-run businesses build resilience in seven specific ways.

1. They are frugal.
2. They set stiff standards for capex.
3. They employ little debt.
4. They make fewer (and smaller) acquisitions.
5. They are more diversified
6. They have greater international orientation.
7. They are better in retaining talent.

PART C: WIT AND WISDOM

1. HUMOUR

- A person in Russia shouted, "Stalin is a fool." He was caught by police and given a double punishment- a fine of 2000 rubles and an imprisonment for 10 years. He asked why he was given double punishment. The police officer replied, "First, you criticized our national leader. Second, you revealed a state secret."
- A bishop was being patronized by a great lord who talked very insolently. "I never go to church," boasted the lord. "Perhaps you've noticed it." "Yes," Bishop said gravely. The Lord said, "Well, the reason is that there're so many hypocrites there." The bishop said smilingly." Oh, don't let that keep you away. There is always room for one more, you know."

2. WISE SAWS

- The greatest obstacle to discovery is not ignorance - it is the illusion of knowledge.. Daniel J. Boorslin
- About the only thing that comes to us without effort is old age ...Gloria Pitzer