

# Certification Paradigm of Johari Window Human Capital

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**Abstract**—This concept paper contextualize human capital of the Self's to an arbitrary financial balance sheet within the Johari Window dimension from the Self's progressive investment in education and experiences to advance its skill. Two main drivers for enhancing human capital are offered: instructional pedagogy direction that stimulates critical thinking and motivating learning from various perspectives. Using the SEE-I paradigm, presentation favours graduates' need of financial economics decisions capability certification (FEDC) to enhance their employability. An order of discussion citing published sources had aroused an opportunity for FEDC with witnesses and proxies lending prospect for success and criteria that focus on critical learning.

**Index Terms**—Balance sheet, certification, human capital, Johari Window, SEE-I.

## I. INTRODUCTION

This concept paper contextualizes human capital to a micro concept of self-equity by considering a person as the lowest level form of production entity. The self-entity is viewed as a Johari Window Balance sheet (JBS) with the sole aim to raise its value with assets in learning skills.

Adam Smith defined human capital as “The acquired and useful abilities of all the inhabitants or members of the society. The acquisition of such talents, by the maintenance of the acquirer during his education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in his person. Those talents, as they make a part of his fortune, so do them likewise that of the society to which he belongs. The improved dexterity of a workman may be considered in the same light as a machine or instrument of trade which facilitates and abridges labor, and which, though it costs a certain expense, repays that expense with a profit.” [1].

## II. JOHARI WINDOW BALANCE SHEET

Johari Window [2] shows the self's awareness with the left side being what the Self knows and the right side being unknown to the self. Changes in the size of JW are accountable within the JW block according to the quantitative growth of the each quadrant's interactive evaluation of the Self's human capital. The Financial Balance Sheet (FBS) in Table I is adapted into the JW grid to dimension the Self's human capital because FBS format has four quadrants of ratios that match displays the Self's human

capital to resemble a simplified financial position of the Self. FBS's growth is reflective in its four quadrants ratios. Likewise with human capital growth, JW's four quadrants are: known to others, unknown to others, unknown to the Self but known to others, and unknown to all. That being the reason for the FBS format to interface seamlessly to the JW has resulted in a Johari Window Balance Sheet (JBS).

TABLE I: FINANCIAL BALANCE SHEET (FBS)

	Assets	Liabilities	
Efficiency ratios	Current assets	Current liabilities	Solvency ratios
Profitability ratios	Long term assets	Long term liabilities and Equity	Marketability ratios
	Credentials	Potentials	

TABLE II: JOHARI WINDOW BALANCE SHEET (JBS)

	Strength	Weakness	
Known to others	Open=JA (measures efficiency)	Blind=JC (measures solvency)	Risks
Not known to others	Hidden=JB (measures profitability)	Unknown=JD (measures marketability)	Exact worth
	Known to self	Not known to self	

A JBS format is considered for it matches the Self's income potentials and expenses arising from skills which in turn are derived from the assets of higher education. JBS differs from a company's balance sheet in that JBS has ownership of all knowledge whereas in a company the knowledge leaves when the employee leaves; notwithstanding individual country's labor laws which may all companies to require their staff commit to all intellectual rights during their service periods. The other difference between FBS and JBS is the layout size of their quadrant. In FBS, the sum of the left quadrants equates that of the right. In JBS, the four quadrants positions remain except that each quadrant's value can vary yet a whole they add up 100%.

Each JBS quadrants JA, JB, JC and JD guides the Self's in visualizing the shape of its human capital dimension. In the left side of Table II, JA and JB display their equivalence to FBS current and long term assets while the right side JC and JD show their relative resemblances to current and long term liabilities (including equity) in FBS.. Ultimately the inter-relationships transactions [3] of JA and JB are to reduce the unknown area so as to predict the value of the Self for considering human capital in JD.

While the concept of human capital in JBS span many variables within JW, its context in this paper is limited to

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compensation for assets in skills that can gain personal credential in professional knowledge capable of competently exchange continuously incremental economic value for the self as learning towards a skill for a specific human capital commodity needs sustaining [4]. This has direct bearing to market driven responsiveness with the correct mix of variables (educational, skill, experiences) that enhances decision making capabilities.

Conceptually, JW is dimensioned to match the Self's 4 financial groupings [5]; efficiency ratios, profitability ratios, solvency ratios and marketability ratios to illustrate the self's intellectual equity growth from cumulative education. The focus is on the efficiency ratio because financially speaking, these resemblances to FBS current assets need to be immediately salable as measure of efficiency. Treating the Self as a JBS, therefore the efficiency (speed) to perform decisions enhances the capacity of the Self and directly enhances the Self's human capital as a capital asset value that rises when it is value added with education, skills, knowledge and experiences over time. Its value reduces when the person dies, fully used, obsoleted, depreciated (becomes uncompetitive) or transferred i.e. ultimately JA, JB, JC, JD=0.

#### *A. Efficiency*

FBS efficiency ratios have current assets' value measured their liquidity nature that can be deployable immediately for revenue generation with cash being the most liquid and therefore immediately deployable [5]. Supporting current asset turnover increase is accounts receivable and inventory with efficiency in collectibles and times stocks are replaced.

JBS's current asset represents value and quality of skills due to its liquidity to sell skill for revenue. The liquidity ranking resemblance in JBS is skill, education and experience that can be used immediately subject to efficiency in translating them to match demand at preferred price. Education and experiences resemble accounts receivable and inventory respectively in that their frequent use means increased turnover; the efficiency aspect being uncommon knowledge from instructional pedagogy and experience add value to skills in order to command higher value. The relativity of experience history are appropriately retrieved for application references such that in combination with education, skill is wholesomely enhanced by cognitive speed to recollect and apply theories and practice to current deployment; slower speed reduces effectiveness in thinking. JA is the focused quadrant and its human capital growth is compensated by size reduction in other quadrants. The aim of the Self is to expand the open free quadrant competitive value with market driven capabilities suggest that JA efficiency in making decision enhances the Self's marketability quadrant JD. Qualitative questions to evaluate this quadrant ask to rate perceived speed of selling (contract out skill or secure employment) skills for an anticipated price.

Example a person's skill can command a market value of \$y and the buyer has a task that is priced at \$x and the JBS has the skill that is willing to receive compensation. Then the quality of that human capital commands a higher ratio of \$x/\$y times (the higher the better). The JBS's capability to perform JA more efficiently and effectively allows the

market (buyer) improve its JC solvency and therefore free resources for other ventures. Additionally, JA's relies on cognitive ability being the Self's current assets and its development becomes responsive to reduce risk exposure in JC which relates to the blind side of JW. The efficiency of JA is measurable by JA size expansion; representing demand for the Self's skills that take shorter time to be converted to cash.

#### *B. Profitability*

FBS profitability ratios measure effectiveness of long term asset application to revenue generation by means of asset turnover from major variables such as plant, machinery and buildings [5]. The hidden quadrant, JB contains the Self's potential human capital which the Market does not yet know and therefore does not contribute to current skill in JA. JB fruition by decrease in size when the market knows it can benefit from the Self's and thereafter response to expand JA.

Long term assets being assets that stay longer with the Self with ability to generate revenue; the Self reckons that investing in life-long learning increases its human capital competitiveness with skills that are market driven. The JBS dimension that as investment in continuous learning; higher education, specialized course, professional updates, increased professional credentials; adding confidence to the Self's current skills; equipment, materials for knowledge are included. JB equivalence representation of long term assets is strength from potentials capable of generating revenues. Qualitative questions rate if there is plan to upgrade skill by advance education or training; if the finances can enhance values in JA or/and further expose financial risk in JC.

#### *C. Solvency*

Financial solvency ratios are dependent on financial efficiency ratios in FBS such that a higher surplus means healthier working capital [5]. On the liability side of FBS are found all variables related to obligations. Represent the blind zone with exposure of risk in loans related to developing human capital such as study loan need a payment schedule. Variables representing risk are skill relevancy and the regular evaluation in resizing this quadrant is the Self's response to the relevance to solvency to its skills in JA. When relevance equates solvency; JC size reduces as the Self's solvency increase with ability to reduce its education debts with its ability in selling its skills. Human capital effectiveness in JBS is seen by capability to generate revenue that after offsetting current debts. Qualitative questions are to ask for rating the risk of financial solvency when skills are not sold at the price perceived in JA.

#### *D. Marketability*

Marketability of a company's worth is measured by EPS [5]. On JBS, JD size reduces when the Self's awareness of its skills' marketability is less uncertain (unknown). The worth of initial investment into Self's skill development through previous education begins its earning abilities and its net surplus from previous year added on to the current year as further investment in live long learning and live long process of accumulating noticeable credentials for its human capital value. The qualitative questions is expected to score the Self's aware of its perceived intellectual capital with the reality in JA such that  $JD < JA + JC$ .

III. CRITICAL THINKING ENHANCES HUMAN CAPITAL

All being equal, with the aim of expanding JA>0 to reflect sustainability in human capital value, several enhancers might simulate critical thinking skills. Nonetheless these enhancers such as instructional pedagogy is subject to the Self's motivational needs when it realizes that new economies need new learning [6]. Critical thinking is found in 9 out of 10 most in-demand jobs that are related to ability to solve complex problem, judgments and decisions [7]. Together with new economies that new skills are market driven to innovate instructional pedagogy. All being equal, efficiency in critical thinking enhances the Self's skill in JA as doing so enhances the Self's value. Adopting Alderfer's thoughts, the ability of knowledge management with thinking tools such as decision tree and concept map are to speed up input-output cognitive efficiency [8]. Through end-in-sight conceptual mapping techniques, cognitively overloading of non-essentials is avoided for better data immediate access to knowledge warehoused in the mind and clearer critical thinking paths.

Concept maps functions to facilitate handling of large information volume [9]. Like a map that has proper index of routes, therefore by constructing relationships that join ideas and data, new information were constructed to increase efficient benefits from using decision tree commonly taught as one of the fundamental of quantitative methods was its immediate use when deciding between two choices [10]. In using decision tree thinking, a framework laid out the problem with thoughts branching options of consequential decisions. Repetitious efforts of these tools conditions the mind to lower resistance in acceptance the decision logic for choice that was efficiently interpreted so that one can continue to perform with increase data volume using limited mental computing resources without having to spend more time preparing and filtering data, hence critical thinking develops. This form of conditioning thinking tells that familiarity through practice enhances thinking speed on repetitious use of those thinking tools trains mental skills in managing information the way that can be efficiently stored and retrieve; harnessing involuntary reflect action to trigger thinking effort [11].

Interlinking this aspect with concept map and decision tree, there is a good success probability to experiment with more electronic base interactive educational interaction and less formal lectures. That being the future, then machine based case teaching method emergence by Pedagogy 3.0 might be the metacognitive direction [12]. Additional the above mentioned preferences emphasized for electronic interfaces. However there remained ways to make seminars more interesting and time-efficient in explaining theories so that non-face-contact workshops can be effective facilitated beyond proximity.

The employment of concept mapping has been wide according to few regular writers promoting this aspects of illustrative active thinking have identified that those who advocated concept maps to engage learning had supported use of concept mapping [13]-[18]. Graphs were natural integral aspects in decision making courses so were grids but the way illustration presents these concept perhaps may enhance understanding [19], [20] for both qualitative and quantitative analysis, the over reliance of numbers may cause one to be

myopic in analysis by missing out the bigger aspect of what may suspiciously raise issues and the generous use of diagrams might amplify the consolidation of ideas [21], [22].

IV. VARIATION OF LEARNING SKILL

Motivation for learning includes cognitive, affective, conative, social, biological and spiritual [23]. These six motivators can interchange their force field between intrinsic or extrinsic according to their learning needs [24]. While relating JBS to JW, the Self's is subject to risk arising from motive to learning. Everyone has different level of needs that is fulfilling by Self's cognitive abilities arising from motivational needs for education, knowledge and experience; environmentally constrained Table III shows the arbitral visual interaction of the Self's motives relevant to learning from the variables mentioned in this paper that attempts to form a balanced force field [25].

TABLE III: CONSOLIDATION OF MOST VARIABLES IN PAPER

Support →	Force Field		← Pressure
<b>Current Assets (Turnover)</b> Skill (as Cash) Education (as Accounts Receivable) Experiences (as inventory) OVAMA	Direct intrinsic and extrinsic (cognitive, affective)  JA: Efficiency ratio	Direct extrinsic (cognitive, affective)  JC: Solvency ratio	<b>Current Liabilities (Risk)</b> Education debts (payable current yr) Interest payable  OVAMA
<b>Long term assets plan</b> New higher education credential (as Plant) Learning tools (as Equipment) Learning materials (as Building) Publications (as Goodwill) OVAMA	JB: Profitability ratio   Indirect intrinsic (conative, social)	JD: Marketability ratio   Indirect intrinsic and extrinsic (conative, social)	<b>Long term liabilities</b> Long term loans (higher education loan) Initial education value (Equity) Additional income above perceived (Retained earnings) OVAMA
( ): Items within parenthesis refer to financial balance sheet variables OVAMA: Other Variables As Maybe Added Directional arrows indicate effect of each quadrant of the Johari Window upon the Self's' Equity quadrant			

A possible matrix of 32 dimensions of learning styles suggests that learning varies according to senses, needs and market demand; there is no justification in rearranging people [26]-[28]. Motivation type affects learning style because its motive triggers behavioral motive. If there is no stable learning model individual adult defines their own learning plan according to their own understanding of how they learn best for the human capital in their plan. A survey by NUS [29] had ranked social skill in teamwork top among sixteen skills expected by employers with findings from a separate survey mentioning 75% of university students have favored electronic communication for learning related knowledge retrieval [30].

The adult learner entertains many matters in his mind at the same time according to priorities of responsibilities [31]. Interestingly the summarized core of adult learning principle has it that without interfacing with organizational development and redevelopment; the current movement is

happening to a world moving closer due to internet enabled, the hasten pace of globalized trade and metropolis rediscovering themselves after financial upheavals. When adults are affirmed as increasingly self-directing, it was not defined to what extent was meant by self-directing as no settings were discussed [32]. In addition to this discomfort missing link to organizational redevelopment which impacts the need to retrain whenever human capital has to shift to higher values to match changes in economics, motivating instructional pedagogy became unclear. The importance of igniting interest in learning might later upgrade to a higher intrinsic skill because then a person will continue to develop without being drawn by extrinsic knowing that rewards will follow without the pressure of chasing it [33], [34]. This expectation suggests that learners are motivated when their expectations of learning are met and that are reasons for measuring the extent which learning had incapacitated ability to address advisory capacity [34]. What might happen is to train the mind to consolidate prior learning of economics, retrieve it along a decision tree perspective. Therefore leveraging on building familiar cases would enhance effective and efficient engagement in facilitating critical lateral thinking of the elasticity in financial risks due to quantity demand and imputed costs associativity in trading a commodity contract, pricing a project or pricing a manufacturing contract. Further reasoning capacity would influence the understanding of geometric and parametric cost perspectives when finding the best band of profitability; be it product, services or composite. A revised Bloom's Taxonomy which centered design of learning and training initially upon and affective domains was added with psychomotor to construct a structure of learning method and evaluation [35]. Table III shows directional arrow matching those variables. Additionally, technology advent became the catalyst for pedagogic shift towards constructivist principles and techniques and therefore leveraged Bloom's Taxonomy timeless popularity into social constructivism from a much earlier argument for pedagogy that had favored Skinner's behaviorist model in higher education [36], [37].

Cultural influence plays a significant role in motivating learning as evident even within the same country [38]. This is one variable that had modified expectation of learning; Six Asian nations' preferred training be conducted to suit their learning style [39]. Even when re-engineering learning processes, the assumption that style is not to be taken for granted is the most important assumption needed in delivering learning to various settings in different geographical regions [40].

The cause of each learner is self-directing is perhaps better explain by Maslow's hierarchy of needs [24] and McGregor's Theory X, Y [41] considering that adults' level to learn vary according to their circumstances [42]. Understanding several unchallenged theories and philosophy give a significant backdrop in designing and delivering training; constructivism, Socrates cause-effects, ethos, engaging, and facilitation together with exposure to training adults abroad provide insight confidence in designing expectation that can escalate learning to achieve more with less and this opens an interesting question of why and how upon instructional matters[10], [43].

## V. SEE-I PARADIGM

Studies have [17], [44] suggested an opportunity existed for graduates to obtain certification in financial economics decision (FEDC). This differs from those recently implemented [45] [46]. Before 2010, there were lesser opportunities for students wanting a FEDC program and many would opt for economics, accounting, finance and an MBA later. Hence students can transfer from related programs instead of starting all over or graduates can take a post-graduate semester studies for FEDC to align previous learning to obtain quite similar knowledge to that of a degree in financial economics. The alignment process would consolidate relevant learning previously attained in order to quickly discipline the sort of critical thinking required of a starter financial economist. While the intention of FEDC is wholesome and generic, being new to the world, the caveat would be no accreditation process had begun nor was there a professional body to institute its practice.

This paper uses the See-I (CIP) paradigm [47] to paint the need by stating, elaborating, exemplifying and illustrate from references [17], [44] to witness and bear proxies when evidences are not sufficient to convincing successes. CIP is used to argue the case for the opportunity to raise graduates' human capital certification through a financial economics decision making program. CIP is appropriate for argument because it facilitates 360 degree critical wisdom learning as in a moot court where instrument for facilitation are evaluated parallel as critical court prosecutor and critical defendant lawyer. The references as witness and proxies therefore engage with exhausting relational events in CIP [48]-[50] in addition to offer the reflection process and analyse what is learn from the whole process [51]. Furthermore the references categorically zed in a manner that follows the argument; which the problem and proposed confined solution was stated as youth unemployment increased due to mismatched pedagogy, curriculum irrelevancy, impending human capital shortage and desire for education; all pointing towards employability risks [17]. A confined solution suggested enriching a segment of graduates' employability with financial education decisions [17]. But wouldn't that need some form of independent certification? Along with the problem statement is a confined solution for students seeking to transfer from their present program without having to do a full 3 years BS in FE program.

### A. State: Reasons for Graduates' Certification

With ongoing certification of skills, some professions require continuous evaluation to ensure sustainable quality of certification. Stating the reasons for certification, semi-professional accountancy students' and those from related program would want to seek opportunities to transfer from their accountancy program due to difficulty to be admitted into full membership [52]. Given the situation, in raising FEDC as an alternative for students now in semi-professional and related programs, successes and proxies mentioned have lent their supports. Lakehead University (LU) case was among the strongest success case as it had involved the whole of Canada which chose LU to initial a new program by transfer into the degree year of its management system program commenced in 1980 to cater for Canada's demand for MIS professionals [53], [54]. The

LU case had similarity to City University though both were different programs but both along the line of success in transfer. The following published evidences found reasons for certifying graduates.

Graduates' abilities and industries' demand for appropriate skills are mismatched [55]. A separate study also concluded that there is non-collaborative dialogue between industries and universities [56] and programs needed to emphasize on market driven skills [57] to response to new economy [6]. To these, a project "Creating a 21st Century Curriculum" had offered a response [58].

In North America, students' enrolment in professional accounting had dropped [52]. The Senior VP for science and technology at IBM and president of Princeton University, both agreed that "where the limits of universities lie and where industry must pick up the reins where great science literacy is needed" [59]. If American university graduates are ready for work [60]. The situation in the Middle East reported Arab youth are in dire need of employment [61] but the education programs in the Arab world were irrelevant in linking to jobs [62]. OECD reported bleak employment outlook for 2011 [63], partly because education systems were irresponsible not investing in youth [64]. Malaysia Public Service Department Report to the Economic Planning Unit has it that Malaysia need to increase training for its manufacturing industries [65]. Malaysia needs an education that is market-driven [66]. China's bureaucratic process is slow to response to curriculum improvement [67] while CCTV's interview suggested that Chin's education is teacher centric as opposed to that in the U.S. [68]. Additionally the demand by Pearl River Delta has impending human capital shortage; the HKPU responded with an emphasis on Work-Integrated-Education [69]. Lastly, new careers demand financial economics skill in asset valuation and trading and that "those proficient in this discipline are finding their skills increasingly in demand for acquisitions and managing other major financial decisions for the company" [70].

A reason that the FEDC program would be attractive to current students from related program and who wish a transfer alternative is that they might receive maximum credits transfer. This is because they might be familiar with fundamental knowledge of asset valuation rest upon knowing how to read and analyse financial statement. Some recent innovations were begun by few following universities. HKPU offered a double degree in business administration and engineering [71] after it and Warwick U. jointly held their 18th Congregation for Integrated Engineering Business Management Program [72] learning from Warwick U. offering of an engineering business program [73]. Columbia University senate endorsed a graduate level Financial Economics Program [45] while the City University offered also begun a BSc in Financial Economics [46]. As a result of this familiarity, the transfer would be green field instead of blue ocean strategy. The demand is further demonstrated by universities offerings of the financial economics programs. The rising demand of FEDC related program at graduate level was a sign of evolving social functionalism environment that caused demand for new skills. For this reason, FEDC course modules would consolidate previous economics and finance learning.

The FEDC program would be a suitable transfer path for semi-professionals in accountancy, economics and related programs because the FEDC program would leverage on the fundamental knowledge of students who transfer from related program. Benchmarking success in motivating the new generation Z for learning are important because their expectations differ from previous generations in [43]. The prospect of success is evidently good because the program would provide students the basis for understanding advance seminars facilitated by instructional critical thinking techniques; decision tree, concept maps, promptings and cases to develop and discipline knowledge management in recollection and reflection in its 3 parts program to address motives for learning towards social and conative [43].

Having mentioned the components above at its first part of knowledge consolidation, acquisition, the second part being mandatory Continuous Professional Development (CPD) would require graduating student to log practice time. The third mandatory part would be Work Integrated Dissertation Effort (WIDE) that binds CPD practice to theories [69], [74].

A visible emerging significance would be the growing increasing number of Graduate/Professional Educators offering this program. This positive sign is pre-emptive of skill shortage with reference to Canada's response for a particular skill in the 1980s [53], [54]. The epitome of FEDC would be subjects' cognitive ability to practice and that would redefine higher level financial economics programs as the context remains decision making in money as a tradable commodity for higher expected future money value that meets ROI within acceptable informed risk level and which has to be managed by eliminating uncertainties through reliable and confirmable good value information [75], [76]. Along this elimination process, one identifies options available to hedge against uncertain risk by diversifying money resources on hand to different asset classes, projects or products that would have more definite certainties to meet desired expected future money value.

The possible indications that would contribute to the success of FEDC as a transfer path would be students' effort in consolidating learning by adding new knowledge in financial economics to prior learning by intrinsic motives for cognitive development by affective means [77]. The key in consolidating knowledge would depend on instructional pedagogy capable of disciplining the mind in storing and retrieving the right knowledge for professional practices [78], [79].

The market driven element of the FEDC program refers to the FEDC pedagogy's ability to captivate students to pursue opportunity within the confines of laws and ethics and this has to be reported in their CPD much as the workshops/seminars have provided the training [69], [74], [79]. The market driven element in the program would be by students demonstrating their professional competency in CPD; evidenced by Germany/Austria's successful dual education program [80] whereby students worked full time for a period after studies and then return to class to resume their studies.

#### *B. Elaborating: Motivating Graduates Certification*

To clarify graduates need FEDC, from the onset of an exploratory quantitative study [44], 'Z Generation students'

(Z) would emphasize more on social and conative motivational quotients are more important to achieve their goals. This discovery could be a game changer in motivating learning because those transferring into the FEDC program would be among early Z. Understanding their motive to learn would affect pedagogy instructional aspects to trigger cognition resonance when engaging students by case teaching method. Said to be engaging through facilitation; classroom control when handed over to Z would cause much learning connectivity among students in view of their emphasis in social networking. Incorporating these characteristics into the design of instructional system would reduce risk in motivating learning, failing which would risk forming communication barrier between faculty and students. The reason being the limits of formal instructional methods for cognitive development continued to lean on creating constructivism, therefore capitalising on social networking needs brought by technological would definitely enhance Z's learning.

Interestingly the affective motive was opposite that of conative in the study. A possible explanation could be that supervisors at CPD Company were either from the tail end of Gen X or somewhere within Gen Y whereas subjects in that study were at the beginning of Z. All three generations have different perspective of culture in work and career. Lady subjects also paid less attention to cognitive against men subjects according to the same study [44].

The Cognitive and Affective intrinsic motivational quotients were more important in FEDC because these two represent the contact time in seminar/workshops by the facilitator and were discussed in totality because they were interlinked. Learning has plenty to do with information processing, storing and retrieval; instructional methods were directly related to disciplining critical thinking for processing information [81]. The cognitive aspect was for instructional methods to develop critical thinking path to retrieve the right knowledge in time to process information for making professional advise/decisions that were expected of professional exams and for CPD practices while the affective aspect trigger the engagement of mind, matters and form. The importance of igniting the joy of learning would upgrade to a higher intrinsic skill because then a person would have continued to develop without being drawn by extrinsic knowing that rewards will follow without the pressure of chasing it [23]. Expectancy theory suggest that learners are motivated when their expectation of what they will learn from the training were met and that would be the reason for measuring the extent that training has met the learners' expectation [34]. Having mentioned the importance of cognitive and affective motivators, this was not to undermine the importance of social and conative motives which are almost not consider influencing knowledge delivery within formal classroom. Beyond classroom is where CPD adds value to Z's learning not just by inducing practice but also the development of social relationship skills.

### *C. Exemplifying: Competencies of FEDC*

CEOs have rated 81.8 % for decision making leadership [58]. A list of expectation for competence in critical thinking that is reflective, authentic and debatably reasonable within standards practiced for the matters on hand, hence his CIP

that suggested graduates possess attributes demanded by industries of which decision making and problem solving skill were among top 5 expectations [82]. This expectation can be met with interweaving skills for critical thinking tools such as

'Break-Even Economics-Equilibrium' capstone [83], decision tree, DFD, charts and diagrams and the Harvard Case method that complement Deming's PDCA [78], [84]-[86]. The ability of knowledge management by decision tree and concept map for input-output efficiency speeds up growth and relatedness in FEDC [8]-[11]. On the basis of the 20:80 rule [87] knowledge of 20% of knowledge can perform 80% expectation with getting more from less through conceptual map that avoids cognitively overloading of non-essentials cloud critical thinking [10].

An earlier related study had emphasized on workflow and concept map by regular prompting [17]. This agreed with an affective intrinsic motive score that through Socrates method upon instructional methods of concept maps and decision tree would be a better stimulus to engage learners as it developed multi-dimensional perspective constructs from the instruments used for critical thinking such as WIDE, concept maps and decision tree [77]. The one importance of WIDE would harness reflection of learning from few direct sources; prior-learning, current add-ons at seminars/workshop and CPD. Coming together of these sources into WIDE, constructs of abstract concepts that resonance challenge on a topic or learning episode that unless resolved could conflict existing knowledge, hence WIDE would enhance the learning process as the program continues with a rebalance schedule and a revised taxonomy [78].

Beyond formal classroom would be CPD activities to consolidate knowledge. The analysis had observed that if companies were in agreement with the subjects' progressive learning and capacity to retain essential knowledge in consolidating pre-exist knowledge with new learning to create skills for their structural functionalism society, although this conative element was insignificant. Extrinsic motive in learning has low indication in learning support as discussed that intrinsic motivations have overcome even the expectations raised by CPD companies as indicated by the score differences between CPD and subjects. This indication of increase in non-dependency on extrinsic cues was significant of the FEDC program's general ability to create learning as consuming passion to stimulate the average student continue learning with less extrinsic influences.

FEDC pedagogy had reviewed wide usage of concept mapping to illustrate active thinking in finance [13]-[16]. A survey of 15 publications' pedagogical approaches had identified that some who advocated concept maps to engage learning also illustrated their supports in using concept mapping in accounting [17], [18]. Graphs were natural integral aspects in decision making courses so were grids but the way illustration presents these concept perhaps may enhance understanding] suggested that for both qualitative and quantitative analysis [19], [20], the over reliance of numbers may cause myopic analysis; use of used generous diagrams to amplify the coming together of financial economic ideas for product revisions [21], [22]. The approach in FEDC pedagogy used the few condensed concept maps in consolidating learning such that thinking would be

involuntary reflection needing no trigger effort. To motivate the mind towards achieving this level, the 4 constructivist pillars of learning have to play their roles [88], [89].

#### *D. Illustrate: Professionalization*

A reason for sustainability of the need for professionalising FEDC education is for transactional expectations between graduates/professional (G/P) and industries so that graduates' employability can be enhanced in market driven economies. This implies that synchronizing G/P to industry would sustainably establish continuous relationship management for effective knowledge transmission and dissemination of learning outcomes [17]. To that end, then motivational means by the instructor's own philosophical beliefs of instructions would be governed by learners' background, knowledge and experience, situation and environment, according to the 4 level instructional pedagogy of a revised taxonomy [78]. Together, the above would effectively interlink the pedagogy of the scalable 3 parts FEDC program to consolidate prior knowledge along a closely monitored FEDC program. In composite, this effort would incapacitated the program as an object to professionalize human capital capable of consolidating prior leaning, practice theories and relate theories to practice. Professionalism requires graduates with advisory ability gained through CPD and WIDE [69], [74].

## VI. DEVELOPING A FEDC TEST

To illustrate FEDC, a following successful industrial story might be useful to work backwards towards challenging graduates' decision making abilities by identifying 3 high value questions (3HVQ) frequently asked at FED proposition. They are 'What-How-When' [78]; 'What' being the queried opportunity, 'How' being the queried cost and 'When' being the time required to recover the cost and meet profit target. The aim of focusing in addressing 3HVQ is essential in transforming human capital; a graduate's capital value [90].

All being equal, market driven is measurable by order winning capability of affordable pricing than exceeds IRR. Yet IRR would articulate cost factors to revise products that would meet market specifications and satisfaction. Long range investment project might require advancing thoughts to determine if a new product should enter a new market. For this a manufacturing strategy paradigm in Fig. 4 [22] would link back and from between Fig. 3 and Fig. 4. Within Fig. 4, each of its hexagonal 6 parts requires monies. Matching in totality against would be demand to formulate inputs from Fig. 4 to Fig. 3 to satisfy market driven aspects. With the other inputs coming from Fig. 2 into Fig. 3, if without competition, a bolder pricing decision might be attempted. This being the case scenario, then the class might imagine as follows.

Again following the manufacturing strategy paradigm of Fig. 4, initial economic research going back and from between Fig. 4 and Fig. 3 for a low capacity car in 1989 suggested the market while affording part of their disposable income would purchase a reliable mini-car that has all round quality with a reliable service network. Going from Fig. 3 to Fig. 2 the FED model handsomely ascertain an affordable price for the masses and the Perodua brand was born.

Investment in a low capacity engine had gradually led the company to dominate the automotive market in 2010 as in Fig. 5. The brand's FED model had first consider economics and costing factors that affected its required financial performance in the decision tree schema of Fig. 2 and simulate effects for export [90] or response to revision for new models [22].

For classroom case facilitation, the facilitator might monitor learning progress through prompting directed at evaluating the magnitude of change in  $E^{XY}$  of Fig. 1 [83]. Each learner would evaluate their answers against that provided. After they have displayed spreadsheet to exemplify the theoretical 4 curves and 2 intersects in in Fig. 1; fixed costs, variable costs, net sales (which is also the supply curve) and demand. The 2 intersects X1 and X2 would zone break even and economic equilibrium to represent the risk factor [70]; first base on static information, then follow by a dynamic effect when cost values and demand change. Repeating such cases would condition the mind into not just retrieving knowledge but re-warehousing that knowledge at more efficient retrieval route with a revised taxonomy [78]

Therefore leveraging on building familiar cases would enhance effective and efficient engagement in facilitating critical lateral thinking of both systematic and non-systematic financial risks within the elasticity of  $E^{XY}$ . The reason for these two risks types would be due to that quantity demand and imputed costs associativity in either trading a commodity contract, pricing a project or manufacturing contract would subject costs influences to geometric and parametric perspectives when finding the best band of profitability within  $E^{XY}$ , be it product, services or composite.

Adopting from Fig. 3, the taxonomy of the decision tree in Fig. 1 would implode into a new dimensional view depicting economics in ONE concept map of Fig. 3 which provided external inputs from the economy. Together from information retrieved through the decision tree, a feel for the IRR became conceivable as framed in Fig. 2. What happened then would train the mind to consolidate prior learning from economics to retrieve it along a decision tree perspective. The economic data on this map would then mentally links the logic to the BEEE diagram of Fig. 1 for visualizing FED risks between points  $X^{1a}$  to  $X^{1c}$ .

## VII. CONCLUDING REMARKS

The combinatorial effects of a financial balance sheet upon Johari Window enhances the projection of the Self's human capital image over time periods. With further understand by the Self's motivational effort and choice of learning style according to situational needs, all being equal, the Self's can determine its capabilities to achieve its desired human capital level. On a broader scope, sustainability of the FEDC program would reduce tensions with industries by meeting structural functionalism with advent in technology, social shift to professional class, cosmopolitanism and citizenry values.

For the argument to qualify into other regions, expectations might by different motivational factors for similar program [91]. The CIP approach had demonstrated with the assistance of proxies that the FEDC program should be propagated and made obtainable by a top-up degree program in FED or another semester of post-graduate studies.

In doing so, the important effect would enhance matching of higher education to industry's needs. By that, not only would employability of a segment of graduates be enhanced but

human capital is appreciated by industries in addition to effective utilization of tax payers' monies.

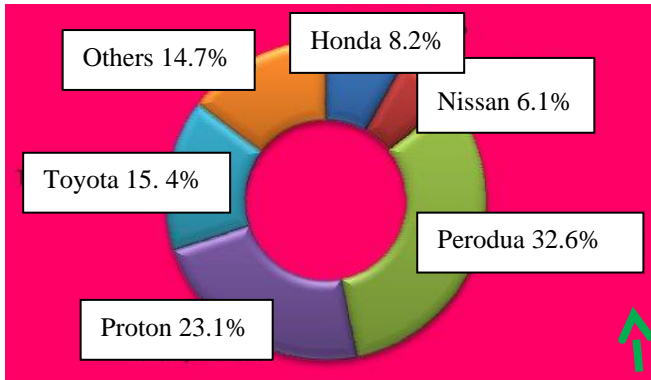


Fig. 5. Market share comparison April 2010 [92].

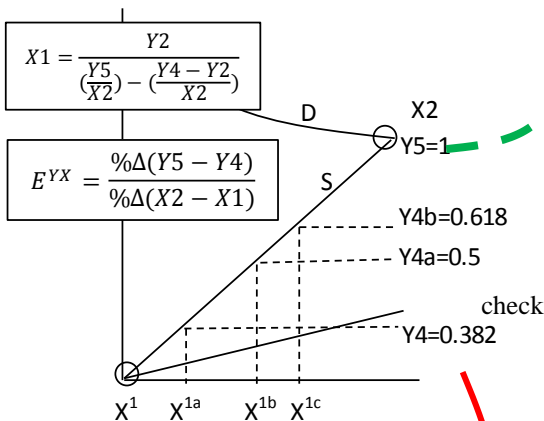


Fig. 1. Elasticity of Break-Even-Economics Equilibrium.

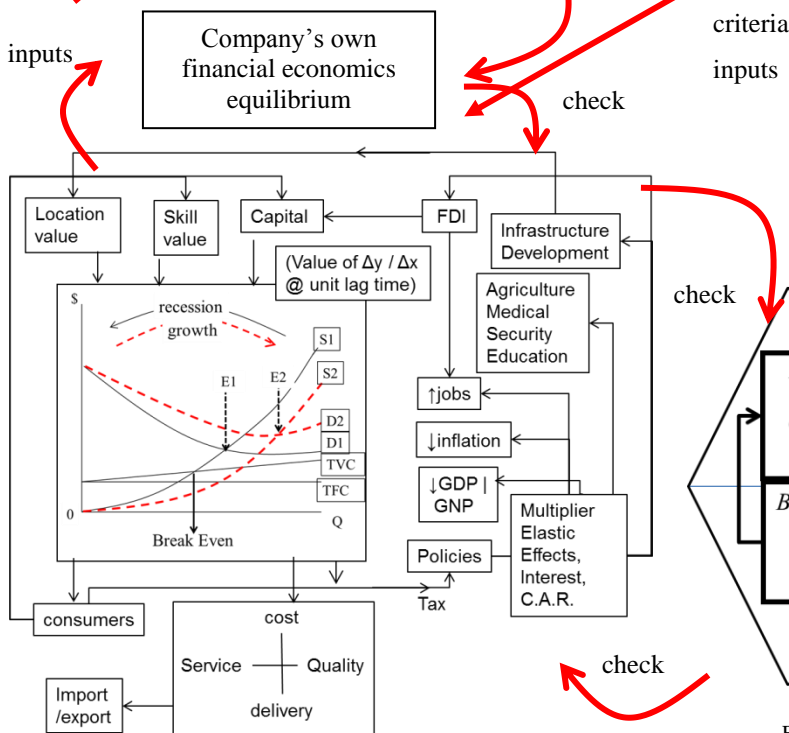


Fig. 3. Economics in ONE concept map.

E YX	Fiscal	Jobs	Skills
			Training
			Mechanization
	Inflation		Cost
			Sources
			Alternatives
	Growth		Demand Mgmt.
			Supply Mgmt.
			Life Cycle Mgmt.
	Cash flow		Inflow Mgmt.
			Outflow Mgmt.
			WorkCap Mgmt.
Income Stmt		Revenue	
		Ops Expense	
		Profit/Break Even	
Balance Sheet		Asset Mgmt.	
		Liability Mgmt.	
		Shareholders / Dividend Mgmt.	
WACC		Capital structure	
		Loan	
		Creditor	
ROE		Earnings	
		Shareholder	
		Dividend	
Bank		M&A	
		Investment	
		Prudence	

Fig. 2. Company's own financial economics.

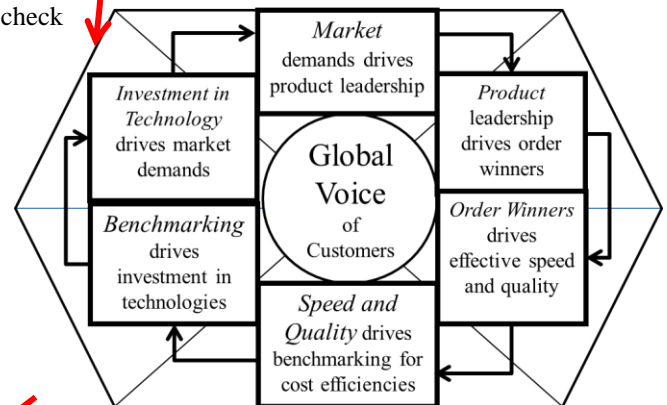


Fig. 4. Manufacturing strategy paradigm concept map.

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