

Advertorial

Lessons from the last 74 years Political legacy of Sri Lanka to rescue the nation

The outgrowths of 74 years' intolerable political legacy resulted in the contemporary crisis of the country. Although Sri Lankans are emotional and often misled by the myths, the present uprising of the public indicates civic engagement beyond the party politics, religion, race and ethnicity to eradicate economic chaos in the country. Most pressurising questions are 'what is next?' And 'would instant recovery of present social and economy be the solution for a sustainable nation?' Traditionally, most Sri Lankans are under two major political wings that share the benefits from the public treasury since the day of independence.

Although they stand strong with these two parties to anticipate their personal and societal needs, today's uprising does not claim any political party, religion, ethnicity, or race. On the one hand, the present uprising is interpreted to demand immediate social and economic recovery from the current crisis, on the other hand, it is interpreted to bring a system change to establish the law of the land and manage public resources to ensure the sustainability of the nation.

Reviewing the nation's early history and legacy of politics in post-independent Sri Lanka would enable us to embark on clear criteria to reform the nation with genuine democracy.

Sri Lanka is one of the unique nations that embrace the richest prehistoric and historic background of ancient human civilization naturally bound dwelling systems, even though it is a small island. Over 200 kings ruled this tiny island with their own set of principles and legal systems until colonised by the British. Although the majority of the kings adopted the feudal system for socio-economic development, still many Sri Lankan historians and archaeologists appreciate the rulings under the kings' regimes.

Local people were living peacefully with their simple and authentic lifestyles while overcoming their socio-economic challenges within the local capacity. However, overseas penetration and colonisation pushed the people into a more competitive, comparative and complicated lifestyle that encountered material prosperity and imperialism. Social stratifications and classification become worsened in the latter parts of colonial ruling than in the kings' regimes. This led to establishing an emotional society underpinned by various myths about the socio-economic and political behaviour of the country.

The emotion and myths among the community have been well-capitalised by the different political parties to gain the ruling power through elections one after another. The disappearance of authenticity and simplicity along with increasing poverty in the country compelled the people to seek benefits centred and welfare-based ruling. When the vulnerability of the people was coated with emotion and myths, political parties found the easiest avenue to gain power through disputing and dividing the people concerning minority and majority, religion and ethnicity.

This led to chronic political misfortunes in the country rather than establishing an independent nation. The myth, the better survival of someone depends on discrimination of another led the people to use their votes for their benefit by dividing political parties, religions and ethnicity. This did not allow the country to establish the law of the land and system of resource administration to become an independent nation.

Although we were liberalised by colonial masters, we became hostiles of different political parties in the country to gain some benefit from the public treasury through favoured politicians.

Alexander Fraser Tytler stated, "the majority always votes for the candidates who promise the most benefits from the public treasury, with the result that every democracy will finally collapse due to loosen fiscal policy, which is always followed by a dictatorship". A similar context has been undergone by Sri Lanka through capitalising vulnerability of people. This created the opportunities for the rulers to ill-treat the law of the land and misuse the country's physical and human resources as



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they wish. Although parliament has been entrusted with the management of public resources and safeguarding the law of the land, the representatives who were chosen by the sovereign power of the people become self-centred and started to seek their superiority rather than concern the country and the community. Common interest and common goals of the nation have been ignored and their vote bases connected with party, religion, race and ethnicity have been prioritised. Safeguarding the law of the land and managing the nation for a better future for the nation have been excluded. Hence, the nation lost the common ground to enforce the law of the land and capitalise on the public resources, when people's representatives become political agents to play their political agenda.

The house of the national assembly, the parliament became an assembly of different political agents to enhance their selfishness in the love of the power. Hence, the supreme house of the democratic republic has been degraded to elicit the personal whims and fancies of

political agents rather than regulating the law and order and resource administration.

When the country obtained and declared democratic-republican status, we assumed the democracy is established permanently. Alexis de Tocqueville interpreted democracy as temporary in nature always and it collapses as soon as voters vote for benefits from the public treasury. As Sri Lankans approach to benefit the people to stand up as one nation, the individual politician became smart and took the upper hand in enforcing the law of the land and managing the resources.

Gradually people lost their democracy and freedom even though we claimed Sri Lanka as a democratic republic. The continuous failure of democracy and political domination in the last few decades, made people acknowledge political superiority and treat them as VIPs in the country regardless of whether the nation is being ruined by them.

However, prevailing political and economic chaos enabled the people to expose the undemocratic intervention and behaviour of so-called political agents in the Parliament on safeguarding the law of the land and managing the public treasury. Present struggles and uprisings intensify enforcing the law of the land and efficient and effective public treasury administration.

Moreover, struggles also unveil the long-hidden truth of capitalising on the emotion and myths over the religions, ethnicity, race and party politics to divide and rule the nation for the selfishness of the politician beyond the law of the land, and systematic fair resource management to ensure inclusivity, equity and equality in the nation.

On the one hand, struggles to uncover the truth behind the rapid depletion of resources in the country. On the other hand, it also reveals the consequences of irregular and unsystematic development and social welfare in the country as per the political will of the individual politicians. People are enlightened on the mis-utilisation of the resources under the myth of socio-economic welfare development and expansion

that increases the inequality, deprivation, discrimination and inequity within the nation. This results in communal disputes, and conflicts and later converted to violence for the benefit of politicians.

The lessons from the 74 years of political legacy on mis-utilisation of resources and capitalisation of emotions and myths about party politics, ethnicity, religion and race compel the people to stand up as one nation. This will not allow any reservation for deviations, polarisation and discrimination within the nation according to the whims and fancies of politicians. The lessons also persuade the nation to ensure development and socio-economic infrastructure within the capacity rather than borrowing and blowing.

Then, the political misfortunes in post-independent Sri Lanka led the people to forget the definition and clear demarcation of the role of citizens and people's representatives in the Parliament. People are respected and sovereign power is recognised till the counting of votes. After that moment citizens are valueless coins of the country and selected political party and their agents retain all the authority and power. But simple theoretical democracy intensifies the return of power back to the people in a democratic nation.

Retaining people's power with a political party and its agents led to a decay of democracy, de-democratisation, or autocratisation of the nation. This resulted in degrading the law of the land and mis-utilization of physical and human resources in the country without any concerns over the nation's future. This could be observed within the last 74 years at many critical junctions. For example: after the independent governments came to power, they started to use the country's resources for social welfare while ignoring the capitalisation of resources. After the 1977 election, the economic policies and constitutions were changed. After the ending of the war in 2009, the country was pushed into a rapid physical development process beyond the actual capacity of the nation, blow the nation through borrowing. All these significant moments,

emotional engagement of the people and retained power with politicians never allowed them to have any concern over the future of the nation.

However, the political and economic chaos that incubated present struggles led the people of the nation to come forward to define and demarcate their role as citizens while restoring the politicians and their roles to the right locations. This can be considered a significant turning point to rescue the nation.

Although previously emotions and myths among the people led them to join various movements and demonstrations even with violence under different agendas and different motives, the present unconditional revolutionary uprising of the people demands restore the sustainable nations concerning the future.

The entire nation including the ruling government, opposite and other political parties and other non-governmental and environmental organisations can take this as a positive turning point to restore the nation for a sustainable future. This will bring the right answer to the question 'what is next?' and can find a sustainable solution within the system without further borrowing to overcome the current crisis on social and economic recovery.

Avoiding accusing, criticising, condemning and retaliating over the present uprising will help to preserve their legendary contribution to the nation and credibility gained through political life and ruling inheritance. Ignoring and suppressing the uprising through different strategies will lead to nude further truths and myths.

However, all the counterparts of the nation should be able to come to a common agreement on certain clear criteria to establish the independent, democratic and sustainable nation of Sri Lanka. This would enable the country to recover from the alarming threat of the current crisis while providing sustainable solutions to restore the nation.

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Estimating a Price Structure for Non-marketed 'Rice Medicine' in Sri Lanka

Peshala Karunarthne and Prof. Wasantha Rathnayake

Introduction

Sri Lanka has a valuable collection of indigenous rice cultivars with roughly 2000 conserved indigenous rice varieties. Indigenous rice varieties are a valuable component of biodiversity in Sri Lanka. They are rich in medicinal and nutritional properties, which can contribute to the development of the society.

There is, however, little or no knowledge among consumers of the healing effects and nutritional properties of the indigenous rice varieties with consumers focusing mainly on the taste and price of the rice whereas globally there is an increasing interest in and demand for organic and 'indigenous' foods. Due to market failures, in Sri Lanka, due to market failures, the value of indigenous rice varieties remains arbitrary while price changes tend to occur very quickly in the market". This may prevent indigenous rice varieties from becoming the preferred option of consumers and threaten in turn the demand for indigenous rice varieties in Sri Lanka.

This study will estimate the consumers' willingness to pay for selected 'indigenous' rice varieties of Sri Lanka taking into consideration the nutritional and medicinal value of each rice variety in order to determine a proper price structure for these non-marketed 'rice medicines' found in Sri Lanka.

Methodology

Models and Estimation Methods
We employed Contingent Valuation Method (CVM) to estimate the willingness to pay (WTP) or demand for the indigenous rice varieties while offering nutritional and healing benefits as a value to consumers.

Scenario Development

Five selected indigenous rice varieties with their unique medicinal and nutritional properties were used for this study. They are Suwandel, Pachchaperumal, Kuruluthuda, Kalu Heenati and Madathawalu. The



CVM was applied in the study and, based on the unique medicinal and nutritional properties of each rice variety, five different scenarios were developed for each rice variety. They are as follows:

Suwandel

Suwandel rice promotes fair and healthy skin; improves the functioning of the excretory system; improves vocal clarity; enhances male sexual potency; helps to control diabetes, ulcers and constipation; reduces high blood pressure

Pachchaperumal

This is considered as a very good



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controller of diabetes and especially good for those with high blood pressure; development of red blood cells; control of the activity of hormones and for proper functioning of the excretory system; increases the production of insulin and reduces the production of thyroxin in the body.

KaluHeenati

Heenati is a rice formulate with various juices to treat diabetic patients. The high fiber content helps to regulate the bowel movements and constipation. This rice variety is also highly recommended for hepatitis patients. It is recommended for daily consumption by lactating mothers due to its nutritional value.



Kuruluthuda

This is known to improve bladder functions and is considered very good for patients with diabetes and high blood pressure. It is also recommended for consumption by persons having high cholesterol and is said to enhance male sexual potency. It is also known to infuse comparatively high energy in consumers.

Madathawalu

This rice variety is said to aid the development of the human body by boosting the immune system. It is known to prevent illnesses like diabetes; remove toxic components, es-



pecially some cancer agents, from the human body. It is also said to clean the blood circulation system and promote the activity of sweating glands. Since it is known to strengthen the immune system, it is considered suitable for infants and for lactating mothers.

One thousand five hundred and forty-five super-market consumers were interviewed using a pretested



questionnaire. The willingness-to-pay (WTP) was calculated for the establishment of a price structure for the above five selected indigenous rice varieties in the following manner: the WTP at household level for the indigenous rice varieties of Suwandel, Pachchaperumal, Kuruluthuda, KaluHeenati and Madathawalu were Rs. 472/-, Rs. 323/-, Rs. 319/-, Rs. 356/- and Rs. 404/- per kg, respectively.

The resulting prices recorded are slightly different (either higher or lower) than the existing market prices for these rice varieties.

The findings of the study show that a majority of consumers are willing to pay higher prices to purchase indigenous rice varieties. Thus, the estimated WTP can be used to introduce a new price structure for indigenous rice varieties available for sale at places such as supermarkets.

The results also point to the need to come up with a long-term policy for the purpose of managing problems relating to the establishment of prices of non-market environmental goods. It is proposed to introduce a proper promotional campaign for marketing the indigenous rice varieties among the general public highlighting the medicinal and nutritional value.

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Advertorial

The triangulation: Research approaches beyond the boundaries

– By Prof. Jayantha N. Dewasiri –

So far, we have discussed the applications and benefits of triangulation, data triangulation and methodological triangulation during the last two weeks. This article aims to discuss theoretical triangulation, investigator triangulation and how to proceed with data analysis in triangulated research.

Theoretical Triangulation

Theoretical triangulation refers to applying multiple theories or hypotheses concurrently to explain the same phenomenon. The intention is to use various lenses and indicators in conceptualisation to provide sound theoretical support to research design and analysis.

Hopper and Hoque warned that no single theory could enjoy an explanatory monopoly. It is argued that Researchers tend to use single theories to obtain a diversity of actors and practices in their studies. The plurality, in theory, provides complementarity, which adds to the depth and richness of the studied phenomenon. It is possible to emphasize two significant paradigms: historical sociology and sociological history.

Historical sociology can be described as historical neo-institutionalism and sociological history as neo-institutionalist history. It is possible to explain the historical neo-institutionalism as a 'theory-driven' approach and neo-institutionalist history as 'story-driven'.

Even though Researchers in neo-institutionalist history are classified as story-driven (drawing on history to illustrate the theory, as is frequently the case with finance Researchers), the theory could be advanced through the integration of history, as exemplified by the rent extraction hypothesis from the free cash flow hypothesis of dividends. It is further argued that neo-institutionalists should focus on applying theory to illuminate history instead of focusing on historical data to elucidate theory.

When conducting theoretical triangulation, the main problem is deciding which theoretical perspectives are suitable for the study. There are both competing and complementary theories of a given phenomenon. There are two competing theoretical perspectives;



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dividend relevance and irrelevance in the dividend puzzle. By merely looking at the theoretical assumptions (related to the social reality) and appropriateness, Researchers could proceed by combining complementary theories (signalling theory, free cash flow theory, catering theory, agency theory, life cycle theory among others) for confirmation and rejection or modification of the argument. An alternative approach is to conduct a pilot study based on different perspectives and select the most appropriate theories to explain the research puzzle.

There are two types of theoretical triangulation guiding research. Theories with similar epistemological assumptions are called 'within-tradition', but the problem arises with 'out of the tradition' arguments.

It is argued that the core assumptions regarding ontology, epistemology and human nature provide the rationale for the particular ways of implementing theoretical triangulation in practice. Proper justifications are required when selecting multiple theories, and they are instrumental when Researchers hold multi-layers of insights on the phenomenon.

Finally, it is possible to emphasise the four interrelated selection criteria of views in triangulation: competing, complementary and compatible explanations. First,



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variable names and meanings should be in line with the ideas; second, descriptions of the causal processes with different perspectives should be consistent; third different theoretical perspectives should be based on the same unit of analysis (individual or firm-level) and fourth, theories should entail causal-model forms.

Furthermore, if Researchers proceed with multiple sources of data (data triangulation), they can increase the accuracy of their judgments and be closer to attaining consensus over explanations.

Investigator Triangulation

Investigator triangulation requires more than one Observer, Interviewer, Investigator, or Data Analyst whose primary responsibility is to collect and interpret data without prior discussion with others. Eventually, the findings are amalgamated based on the consensus amongst the investigators.

It is argued that this approach provides greater credibility to observations while increasing trust over conclusions. The benefits of investigator triangulations are: establishing cross-investigator confirmation, minimising intrinsic biases of investigators, strengthening validity and reliability and ultimately increasing the robustness of findings. It is essential to notice that reduction in bias may sometimes undermine the objectivity of conclusions, as it may be caused by a resisting award, does not have a private office, nor does the chairman.

Like everything else, symbolic egalitarianism, which is practiced in some private sector organisations in Sri Lanka, has advantages and disadvantages.

An egalitarian structure is an ideal recruiting tool for motivating employees dissatisfied with traditional workplaces.

An egalitarian Company allows employees to contribute and share recognition for success equally, one of many advantages of an egalitarianism system. In such a system, an individual worker, while being responsible for personal and team tasks, is not shackled by the chain of authority or by no means disadvantaged by another claiming responsibility

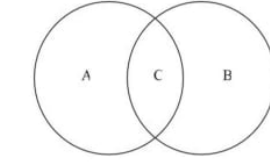


Figure 1. Confirmation and Comprehension through two different/similar approaches.

investigator triangulation to one or more alternative triangulation methods and to allocate experts on qualitative and quantitative methods as investigators.

Hence, it is possible to conduct any triangulation study (data or methodology) by selecting two or more experts on qualitative and quantitative methods as investigators, thereby overcoming the gaps arising from a single method. When multiple triangulation methods are used in a single study, it is known as 'multiple triangulation'.

How to proceed with data analysis in a triangulated research?

Researchers should revise their conceptual framework to include data. Investigator, Methodological or Multiple triangulation, thereby achieving a higher level of theoretical pluralism. Each question or objective in a study should be investigated to achieve confirmation and comprehension of the findings of each strategy.

The seminal research we conducted on dividend policy and corporate social responsibility was based on a data triangulation approach to investigate a single research question in two different approaches in the same philosophical paradigm (quantitatively weighted survey and published data). We correctly proceeded with confirmation and comprehension procedures according to the study's stated research questions and objectives (<https://onlinelibrary.wiley.com/doi/abs/10.1002/pa.2283>).

Confirmation is defined as the convergence of two data sets based on the operationalisation of two available approaches. Even though researchers use various statistical tools to confirm findings derived from two methodological ap-

proaches, problems have arisen when quantifying qualitative data, such as single case findings (outliers) or a non-existing or non-identified code.

To avoid such difficulties, Conceptual Validation can be identified as an alternative approach whereby quantitative and qualitative methods investigate logical patterns of relationships among variables. Then revised hypotheses are generated and tested to overcome gaps derived from the mixed methodology.

Mixing qualitative and quantitative findings leads to increased comprehension, which accelerates understanding of the phenomenon. The difference between confirmation and comprehension is shown in Figure 1.

Even though confirmation refers to similarities of findings (or similar differences), comprehension refers to the total results (including unique differences). If there are individual differences in findings, the two methodologies must be revised in terms of the dimension and indicator level characterising the whole research process, including wording, coding and conceptual validation.

Sometimes, the lack of confirmation may lead to increased insights into the phenomenon, which would not have been achieved from a single method.

Conclusion and Practical Implications

In this article series, the ways and means of applying triangulation approaches in finance research, executive comprehensively and critically reviewed. In addition,

I highlighted its benefits, modes of reducing weaknesses, and the importance of congruence, completeness and divergence.

As a concluding remark, it is possible to argue that applying triangulation may promote a consensus on prevailing issues in financial phenomena that remain after decades (such as the capital structure puzzle).

Moreover, it is suggested that finance researchers justify their selection of relevant methodology, eliminate convenient methodology selection biases, and minimise the inherent weaknesses of the selected method.

It is possible to apply the triangulation approach to Finance Research in five ways: data triangulation, methodological triangulation, theoretical triangulation, investigator triangulation and multiple triangulation.

Despite numerous challenges and issues faced by Researchers, it is possible to propose the creation of a new hybrid discipline in Finance Research merging incongruent binaries within the same tradition. This new discipline would reduce the quantitative-qualitative methodological divide while bridging the gaps between different areas in finance.

Authors' Biography

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The fragrance of Symbolic Egalitarianism: Naval Context and Business Context

Social equality, which the organisations are highly concerned about, is considered a key concept for the betterment of society. Assigning power to various 'managerial positions' in the organisations inevitably initiates a gap among employees, affecting the employees' confidence, predominantly at the bottom levels.

Symbolic egalitarianism, in this context, provides a somewhat successful solution. As Iddagoda and Opatha 2018 identify, symbolic egalitarianism is a competitive advantage and, at the same time, a high-performance work practice. Our primary focus on symbolic egalitarianism in the business and military contexts employing the narrative review method.

Symbolic egalitarianism uses symbols to minimise the differences between the levels of employees, whose purpose is to achieve a common organisational goal.

The characteristics include visible signs, such as dress and dress codes, physical space such as a typical cafeteria, common parking area and constant office arrangements. These are some of the most frequently employed ways of implementing symbolic egalitarianism.

Pfeiffer (1994) and Bolman and Deal (2003) highlight that in the Navy, everyone dines in the same cafeteria in the New United Motor Manufacturing. Co special allotments for executive dining rooms is allocated.

Everyone in this Organisation wears a blue smock, and parking spaces are not reserved for individuals; the motto of NUMMI is 'There are no managers, no supervisors, only team members. In the military context, all the military personnel wear a uniform with certain commonalities representing the military, i.e. Army, Navy and Air force. For instance, in Sri



Commodore Robitha Abeysinghe, Sri Lanka Navy

Lanka Navy, the uniform colours are Navy blue and white.

Egalitarian symbols are found in different forms and versions. As Pfeiffer (1994) states, it is 'dress' hardly any worker in a manufacturing facility is not familiar with the phrase 'the suits are coming', which refers to people from headquarters who are usually more formally dressed.

Pfeiffer (1994) stated how pins with the organisation's insignia or logo are used by Japanese Organisations, which everyone wears to indicate that the person is a part of the Organization.

When it comes to the naval context in Sri Lanka, all the officers and sailors wear a familiar logo representing the Sri Lanka Navy, irrespective of their ranks. That friendly Naval logo mainly consists of Dhamma Chakkraya, the ship's anchor and the lion.

Another effective way of implying 'commonness' is the phys-

ical space. According to Pfeiffer (1994), "the CEO of Solecraft, a contract manufacturer that won the Malcolm Baldrige award, does not have a private office, nor does the chairman."

Like everything else, symbolic egalitarianism, which is practiced in some private sector organisations in Sri Lanka, has advantages and disadvantages.

An egalitarian structure is an ideal recruiting tool for motivating employees dissatisfied with traditional workplaces.

An egalitarian Company allows employees to contribute and share recognition for success equally, one of many advantages of an egalitarianism system. In such a system, an individual worker, while being responsible for personal and team tasks, is not shackled by the chain of authority or by no means disadvantaged by another claiming responsibility



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ANOTHER ADVANTAGE OF SYMBOLIC EGALITARIANISM, ACCORDING TO PFEIFFER (1994), IS THE ACROSS-LEVEL COMMUNICATION ENHANCED BY THE OPPORTUNITY TO INTERACT AND MEET IN LESS FORMAL SETTINGS

for the positive results of someone else's work, as more freedom in an egalitarian Company promotes individual accountability.

As a result, egalitarian Companies can use this structure to recruit employees dissatisfied with traditional workplaces.

Another advantage of symbolic egalitarianism, according to Pfeiffer (1994), is the across-level communication enhanced by the opportunity to interact and meet

in less formal settings.

Meetings in a less traditional setting are observed in specific military contexts, which indicates that the senior management is aware of the actual events and can communicate directly to everyone in the facility.

Reduction in the number of social categories tends to decrease the salience of various subdivisions in the Organisation, diminish the thinking pattern of 'us' by substituting 'them' and create the sense of a common goal.

Symbolic Egalitarianism makes cross-movement easier due to fewer status distinctions to overcome.

Every business is guided by the rationale of providing services to society while making a profit. Symbolic egalitarianism creating numerous opportunities for cost-saving is an advantage for the managers.

As managers have identical efficient spaces like those of other workers, the company may focus more on facilitating the workers than large, fancily furnished offices, executive washrooms and dining rooms.

Expenditure on facilitating for top-level employees can be diverted to improve common workplace facilities for everyone or strengthen the company's bottom line.

As no concept, including symbolic egalitarianism, is 100% perfect, an egalitarian Company may also face problems when the employees adapt to the structure, especially those who are used to the traditional work backgrounds of hierarchical Companies.

For instance, those who had held high-level managerial positions and those who worked in entry-level positions may feel somewhat uncomfortable in the setting.

As a result, it is unlikely that they will constructively engage

with colleagues. Hence, leadership needs to play a significant role in achieving the full benefits of symbolic egalitarianism.

A lack of careful planning and administration can lead an egalitarian company to considerable problems.

Hence, Pfeiffer (1994) emphasizes that although the issues in the new office arrangements include, but are not limited to, an absence of acoustical privacy at times, they signify more equality.

An egalitarian company allows employees to contribute equally and share recognition for success, which is one of many advantages of an egalitarian system.

In such a system, an individual worker who is responsible for personal and teamwork, and they are not shackled by the chain of authority or disadvantaged by the fact that some other claims responsibility for the positive results that others worked for since egalitarian Company culture promotes individual accountability by giving the workers more freedom.

According to Dunham (1984), a person who is high in this component of involvement makes frequent reference to work or the job when they answer the question "what kind of a person am I?" and refers to work or job-related factors; for instance, some may reply "I am a human resource manager", "I am a naval officer/sailor" or "I am from Sri Lanka Navy".

The authors of this paper establish that symbolic egalitarianism ensures employees' self-concept, enabling them to work in their Organisation with dignity.

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Methodological Triangulation

A research approach beyond the boundaries

– By Prof. Jayantha N. Dewasiri –

Campbell and Fiske laid the foundations of methodological triangulation by identifying the multi-method technique as an essential tool to achieve validation and convergence. In 1970, Denzin interpreted this approach as 'between or across methods triangulation'. Methodological Triangulation is the most popular method under all triangulation approaches. It is based on using multiple methodologies (qualitative and quantitative) to investigate a similar phenomenon in a single research study.

The second version of methodological triangulation is known as 'within-method triangulation', where multiple data collection is carried out under one method, achieving higher internal consistency or reliability. The use of the within-method is strongly recommended since a quantitative method (such as a survey) allows the acquisition of multiple scales or indices of a single concept. It is thus possible to identify this approach as a type of data triangulation. Within-method triangulation is also recognised as a helpful cross-validation tool. For example, in a qualitative study, the within-method can combine in-depth interviews and separate observations in the same study. Methodological triangulation is called the mixed methods approach, and it reduces deficiencies and biases which could derive from a single method approach. Additionally, the strengths of one form could compensate for the weaknesses of others.

Unlike other triangulation approaches, methodological triangulation has been applied to management research areas such as marketing, human resources, operations management and business administration, but very rarely to financial studies. The problem often starts at the first step of analysis: choosing between applying the qualitative or quantitative method first or both concurrently.

Creswell (2009) emphasized four critical factors when planning a mixed-method procedure; timing, weighting, mixing and theorising. Timing refers to determining when



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to conduct qualitative and quantitative data collection and whether to proceed with sequential or concurrent phases. If sequential phases are the preferred choice, the decision to move first with qualitative or quantitative data is collected first, the purpose is to explore the phenomenon with a large sample. When data are collected concurrently, the implementation should be simultaneous. Weighting refers to whether the priority is given to quantitative or qualitative design, which depends on the researcher's interest, audience and purpose of the study. Mixing refers to establishing how to mix data collection and analysis based on multiple methods.

The mixing could occur in three phases: connected mixed methods, integrating data and embedding data. In the connected mixed methods, either qualitative or quantitative data collection or analysis occurs first, followed by as is followed by the other approach. In the integrating stage, researchers concurrently proceed with qualitative and quantitative data collection, followed by simultaneous analysis. Under the embedded method, the aim is to collect one type of data while the other type only provides supporting information. Theorising (or the 'transforming lens') refers to the use of theoret-

ical perspective to guide the entire research study; this entails the operationalisation of concepts, the sampling procedure, data collection methods, determining potential implications of the study, among other aspects. Even though these four factors (timing, weighting, mixing and theorising) do not exhaust all the possibilities, six significant methodological designs can be derived.

● **Sequential Exploratory Design:** Quantitative data collection and analysis occur, followed by qualitative data collection and analysis. Finally, an interpretation of the complete analysis is conducted by the Researcher. It is useful when Researchers show a small quantitative information. Applying the mixed methodology is appropriate for a study when the research questions are embedded with qualitative and quantitative aspects (why and what). The sequential explanatory design is widely used when there is a possibility for deduction at the initial research stage. At the same time, the qualitative phase is expected to provide a supporting role. The drawback of this method is the time, complexity and cost involved in the two separate, but it contributes to confirmation, completeness and convergence of results. For instance, if we consider a research problem like 'what are the factors that influence the payout

policy and why do Companies pay dividends?', it is required to follow the mixed methods approach since it has both qualitative and quantitative aspects in a single research question/problem as stated in Figure 1.

● **Sequential Exploratory Design:** Qualitative data collection and analysis occur first, followed by quantitative data collection and analysis in the sequential exploratory design. The final stage is the interpretation of all results. The sequential exploratory design is precious when a researcher develops a new instrument or narrows the focus of possible variables in an unknown construct. Some research questions are being investigated through quantitative models that require a sequential exploratory design. For instance, if you develop a novel behavioural instrument in management, you can test it in a secondary quantitative stage. In the management discipline, researchers could use the mixed-method (instrument development and construct validation (IDCV)) developed by Onwuegbuzie et al. for instrument development and testing in a sequential exploratory design.

● **Sequential Transformative Design:** The sequential transformative design is also driven by one qualitative or quantitative phase (either qualitative or quantitative design followed by the other), but the study is guided by strong theoretical support. However, this design is seldom in use. In particular, it is argued that "Unfortunately, because little has been written to date on this approach, one weakness is that there is little guidance on using the transformative vision to guide the methods". The transformative paradigm serves as an umbrella for research theories and approaches that prioritise social justice and human rights with a solid theoretical backing.

● **Concurrent Triangulation Strategy:** To achieve analytical convergence, confirmation and corroboration, both quantitative and qualitative data collection and analysis should occur concurrently

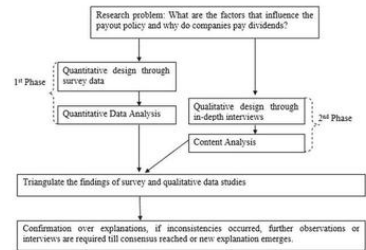


Figure 1. Possible application of a sequential exploratory strategy. Source: Authors' own.

to achieve analytical convergence, confirmation (cross-validation), and corroboration in a single study. The inherent weaknesses of one method could be offset by the other through this approach. This traditional mixed-method model is advantageous because it is familiar to most Researchers and can result in well-validated and substantiated findings. The limitations of this method could be identified as the tremendous effort and expertise required in the study.

● **Concurrent Embedded Strategy:** Unlike the concurrent triangulation strategy, the concurrent embedded strategy focuses on a single phase of both qualitative and quantitative data collection. This approach, therefore, is less time effort- and value-consuming than the mixed method. Priority is given to one way based on the Researcher's primary aims. At the same time, the other method plays a supporting role - an embedded strategy instead of concurrent triangulation results in a supportive part of the qualitative strategy.

● **Concurrent Transformative Strategy:** In the concurrent transformative strategy, both quantitative and qualitative data collection co-occur in a single phase, and the mixing of evidence occurs during the connecting, integrating, or em-

bedding stages while having strong theoretical support. It is suggested that Management Researchers avoid the selection of convenient methodologies while applying the mixed methodology when the studies allow them to do so; the mixed studies should be conducted by developing qualitatively and quantitatively based research questions, and the rationale for mixed methodology should be justified. Participant enrichment, instrument fidelity (IF), treatment integrity, significant enrichment, development, expansion, confirmations, increasing validity and reliability, addressing the inconsistent results, and completeness have been identified as main rationales for conducting mixed-method research in the management discipline.

● To be continued to the following week-

Authors' Biography
Prof. (Dr) Jayantha N. Dewasiri is a Professor attached to the Department of Accounting and Finance, Sabaragamuwa University of Sri Lanka. Further, he currently serves as the Brand Ambassador at Emerald Publishing, UK, and the Secretary (Honourable) of the Sri Lanka Institute of Marketing. He can be reached at jayantha@mgt.sab.ac.lk.

Biogas System Technology - An alternative approach to contemporary problems

The Government of Sri Lanka anticipates achieving the Sustainable Development Goals (SDGs) (Dorn at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012), officially known as "Transforming our world: the 2030 Agenda for Sustainable Development" by 2030 working towards the set targets. One such target is prudent development of indigenous renewable energy sources such as wind, solar and biomass. Developing and improving the security of the energy supply while reducing carbon emissions. Another target is building up a healthy and productive nation guaranteeing the people's right for safe food. The government initiated programs to convert traditional farming villages into users of only organic fertilizer and produce all essential fertilizer domestically.

These targets can be well achieved to a certain level by increased use of biogas as an alternative fuel. Also, it is an identical solution for the current tragedy caused by the LPG shortage. Biogas typically refers to a combustible gas (renewable fuel) produced by the biodegradation of organic matter, including manure, sewage sludge, municipal solid waste, biodegradable waste, or other biodegradable feedstock. After extraction of the energy content of biodegradable organic material, the resulting sludge is still a good fertilizer (organic), supporting general soil quality and higher crop yields.

Suitably designed and operated biogas systems can return a whole range of following benefits for their users, the society and the environment:

- Generation of renewable energy source for heat and electricity production.
- Transformation of organic waste into high-quality organic fertilizer.
- Environmental advantages through the formation of carbon-neutral fuel.
- Environmental advantages through reduction of volume of disposed waste products.
- Micro-economical benefits through energy and fertilizer substitution, additional income sources and increasing yields of animal husbandry and agriculture.

The rest of the article gives more insights about 'Biogas' and household

production of biogas.

What is Biogas?
Biogas is a renewable energy that can be used as an alternative fuel to replace fossil fuels such as kerosene and LPG. As the name suggests, biogas is produced in a biological process, such as, the metabolic product of an aerobic digestion. In the absence of oxygen (an aerobic means without oxygen), organic matter, including manure, sewage sludge, municipal solid waste, biodegradable waste or any other biodegradable feedstock, is broken down to form a gas mixture known as biogas. This process is widely found in nature, taking place in moors, for example, at the bottom of lakes, in slurry pits and the rumen of ruminants. The organic matter is converted almost entirely to biogas by various microorganisms. The resulting gas mixture consists primarily of methane (50-75 vol. %) and carbon dioxide (25-50 vol. %). Biogas also contains small quantities of hydrogen, hydrogen sulphide, ammonia and other trace gases. The gas composition is essentially determined by the substrates, the fermentation (digestion) process and the various technical designs of the plants. Methane, the desired component of biogas, is a colourless, blue burning gas used for cooking, heating and lighting. Biogas is a clean, efficient, and renewable energy source, which can be used as a substitute for other fuels to save energy in rural areas. After the digestion process, the slurry or waste from the digester is rich in ammonium and other nutrients to be used as an organic fertilizer.

The process by which biogas is formed can be divided into a number of steps, mainly hydrolysis, acidogenesis, acetogenesis and methanogenesis. Different bacterial communities work in a syntrophic relationship to form methane. The individual stages of decomposition (degradation) must be coordinated and harmonised with each other in the best way possible to ensure that the process as a whole runs smoothly.

Household biogas production

Almost all organic materials can be degraded to biogas in theory. However, the choice of organic material will depend on the availability of the raw material, the type of



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the digester and its operating conditions. Cow dung was a traditional source for biogas production in the past. Kitchen wastes contain a high amount of fat in the form of animal fat and cooking oil. This high-fat content can enhance biogas production. Hence, the mixture of kitchen waste and cow dung is an ideal raw material for household biogas production as cow dung is a good source of microorganisms.

To produce biogas, a biogas generator called a digester is needed. It is always difficult to adopt one particular type to digest one particular purpose. The design of the digesters is varied based on the geographical location, availability of substrate and climatic conditions. For instance, a digester used in mountainous regions is designed to have less gas volume to avoid gas loss. For tropical countries, it is preferred to have digesters underground due to the geothermal energy. Out of all the different digesters developed, the fixed dome model gained attention due to its easiness of construction and operation.

Fixed dome digesters are usually built underground. The size of the digester depends on the location, the number of households and the amount of substrate available every day. For instance, the size of these digesters can typically vary between 4 and 20 m³. Instead of having a digester for each home, a large volume digester is used to produce biogas for 10-20 homes and is called community type biogas digesters. In places where houses are clustered, these types of biogas digesters are more feasible. More details on digester design and construction are available on the internet and in many related books. However, the very simple setup, as shown in the picture made up of waste materials, would be also helpful for biogas production at the domestic level.

In the digester, biogas production depends on several different parameters. Different groups of microorganisms are involved in methane production, and suitable conditions have to be established to keep all the microorganisms in balance. These parameters are pH, temperature, mixing, substrate, C/N ratio and hydraulic retention time (HRT). Digestion is a slow process, and it takes a minimum of three weeks for the microorganisms to adapt to a new condition when there is a change in substrate or temperature. A symbiotic relationship between the hydrogen-producing acetogenic microorganisms and the hydrogen-consuming methanogens is necessary. Furthermore, a neutral pH is favourable for biogas production since most of the methanogens grow at the pH range of 6.7-7.5. Temperature is also an essential factor in biogas production. Most acid-forming microorganisms grow under mesophilic conditions; however, a higher temperature is favourable for methanogens. Mixing is also an essential parameter for biogas production. Too much mixing stresses the microorganisms, and without mixing, foaming occurs. Methane-forming microorganisms grow slowly, with a doubling time of around 5-16 days. Therefore, the hydraulic retention time should be at least 10-15 days unless these bacteria are retained by, for example, entrapment.

Substrate and the balance of carbon sources with other nutrients such as nitrogen, phosphorus and sulfur are also important. The substrate should be slowly digested; otherwise, easily degradable substrates may cause a sudden increase in acid content. The carbon and nitrogen ratio should be around 16:1-25:1. Too much increase or decrease in the carbon/nitrogen ratio affects biogas production. The concentration of solids in the digester should vary between 7% and 9%.

Biogas application

Cooking and Heating
Biogas produced from household digesters can be used for cooking. The amount of biogas used for cooking purposes can be compared with other commonly used fuels.

- 1 Kg firewood => 0.2 m³ biogas
- 1 Kg dried cow dung => 0.1 m³ biogas
- 1 Kg Charcoal => 0.5 m³ biogas
- 1 L Kerosene => 2.0 m³ biogas

Biogas Stoves

Biogas burning is possible to a certain extent in commercial butane and propane burners because of its physicochemical properties. However, to obtain more benefits, these burners need some modifications. Burners are changed in the gas injector, cross-section and mixing chambers. Some investigation shows biogas burners should have a mixture of biogas and air in a ratio of 1:10.

Fertilizer
The digester leftover from the digester is rich in nitrogen, phosphorus and potassium and can be used as a fertilizer. Due to the aerobic digestion of organic matter, these nutrient concentrations were quickly taken up by plants. The effluent can be directly used as a fertilizer in farming. Digester has a high commercial value when exported. Biogas slurry could help grow algae, water hyacinth, duckweed and fish poly-aquaculture.

Conclusion
Manures produced by two cows can result on average is 0.4 m³ biogas/day and equivalent to electrical energy equal to 1.88 kWh. Although they have been used for many years, modernisation is needed to overcome the drawbacks in the long run. People's awareness of their technical issues and governmental subsidy plans could provide even more benefits for household digesters.

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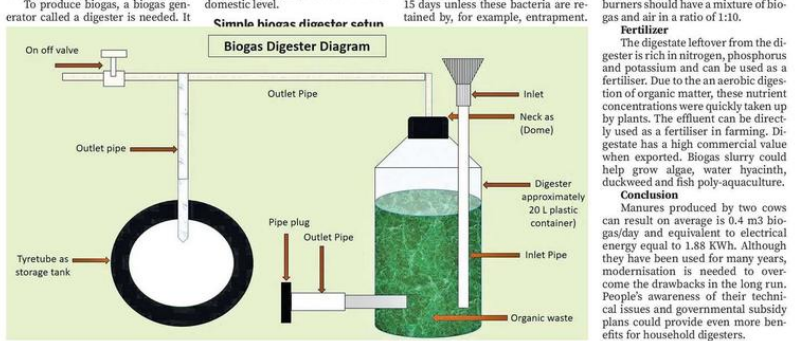
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Advertorial

The Triangulation: Research Approaches beyond the boundaries

– By Prof. Jayantha N. Dewasiri –

Introduction

The purpose of this article series is to critically and comprehensively review the ways and means of using triangulation in management research to overcome the current drawbacks arising from a single research approach. The quantitative research methodology has been one of the most popular approaches to management research over the past thirty years. It is noted that empirical studies in management tend to rely on many secondary data observations, resulting in robust statistical power and analysis of cross-sectional variation. Further, it is identified that researchers have limited ability to deal with non-quantifiable issues as a significant problem in the discipline. It is argued that most finance studies in the last decades have used proxy variables in behavioural models. However, the actual behaviours may be very distinct from what is captured by proxy explanations, and hence further investigation is required to achieve more consensual accounts of actual conduct.

Triangulation has been recognized as a potential solution to this issue. It could be identified as a powerful approach facilitating confirmation and validation of findings through two or more methods/sources in a single study. In particular, it is argued that the more intensive the use of triangulation, the greater the confidence in observed findings. It can be considered a state of mind where creativity is required from researchers and urged to generalize the use of triangulation to obtain sound and valid results. Triangulation is becoming a widely accepted approach to enhance the robustness of the analysis and interpretation of findings of various research studies.

Triangulation can be an effective tool when there are contradictions over the findings derived from applying a single method. The lack of studies based on mixed empirical methods in finance, the inconsistencies of the results of quantitative approaches on financial issues (such as dividend puzzle, capital structure puzzle) and scarcity of theoretical and methodological articles on the triangulation approach in finance research have motivated our study.

By addressing the gap in the literature, the author comprehensively and critically reviews and discusses the ways and means of utilizing triangulation in finance research while at the same time not presenting it as an ultimate or “takeover” approach. It is possible to enhance the findings’ completeness, cohesiveness, validity, and generalizability by using two different approaches or methodologies in a single study. Accordingly, this article series will contribute to the literature by emphasizing the ways and means of using triangulation as an alternative approach in finance research to minimize the inherent weaknesses of a single approach.

The History of Triangulation Approach in Research

In recent years, applying multiple methods and approaches to a single phenomenon has received significant attention in social science in general. However, there are as many different versions of triangulation as there are articulate proponents of the approach. Campbell and Fiskel (1959) laid the foundation of “triangulation” in social science research by arguing that more than one trait and method are needed to increase discrimination and convergence of results, proposing a multi-trait-multi method matrix. Using unobtrusive (non-reactive) measures instead of interviews, questionnaires, and manipulative experiments is possible to avoid their inherent weaknesses.

So far, triangulation has been applied in a limited number of studies. Researchers combined qualitative and quantitative approaches and emphasized the multiple advantages of triangulation, increasing the confidence of findings, suggesting new ways to capture research problems, and synthesizing theories applied to the same phenomenon. In addition, researchers highlighted two main reasons for implementing triangulation: completeness and confirmatory purposes. Jack and Raturi (2006) also pointed out that triangulation engendered completeness, confirmation and contingency and recommended its application to finance



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research. Denzin (1970) identified four forms of triangulation: Data triangulation, investigator triangulation, theoretical triangulation and methodological triangulation. Jack and Raturi (2006) emphasized five triangulation approaches, adding multiple triangulation to the list, including numerous observers, theoretical perspectives, sources of data, and methodologies in a single study. In this article, the author discusses the use of the data triangulation approach in management research.

Data Triangulation

Data triangulation uses a similar type of data sources on time, persons and space in a single study. Data sources may vary due to the time of collection, place, and settings. The survey by Kelley and Krey (1934)

was one of the earliest applications of data triangulation and relied on two data sources (peer judged by students and the world; association test scores) to test four traits; courtesy, honesty, poise and school drive. There are instances where data are collected concurrently (longitudinal studies) and simultaneously implemented and cannot be considered under time triangulation. The studies conducted under time triangulation are based on data collected at different times, aiming to identify similar findings.

Similarly, studies conducted under data triangulation focused on variance in situations, subjects, and places to increase the confidence over conclusions. Researchers identified the data triangulation under the “within the method triangulation” approach, where two methods in the same tradition are being car-



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ried out for complementary and confirmatory purposes. The strengths could compensate for the weaknesses in one data source, which results in increased validity and reliability over findings. The comprehensiveness, convergence, and increased amount of data available for interpretation can be considered the main benefits of data triangulation. After reviewing all available possibilities, the author derived three forms of data triangulation: sequential data triangulation, concurrent data triangulation and multiple data triangulation.

Sequential Data Triangulation: Data collection and analysis occurs in two phases. One data type or source is followed by another, and interpretation is based on the entire findings.

Concurrent Data Triangulation: Data collection and analysis of two data types occurs concurrently in two phases, minimizing the time required compared to the sequential approach. The primary objective of this method is to achieve confirmation while reducing the inherent weaknesses of one data type or source.

Multiple Data Triangulation: More than two data sources to investigate the same phenomenon can be named “multiple data triangulation”. It can also be applied to a sequential or concurrent process.

The weaknesses of data triangulation are investigator or respondent

CONCURRENT DATA TRIANGULATION: DATA COLLECTION AND ANALYSIS OF TWO DATA TYPES OCCURS CONCURRENTLY IN TWO PHASES, MINIMIZING THE TIME REQUIRED COMPARED TO THE SEQUENTIAL APPROACH. THE PRIMARY OBJECTIVE OF THIS METHOD IS TO ACHIEVE CONFIRMATION WHILE REDUCING THE INHERENT WEAKNESSES OF ONE DATA TYPE OR SOURCE

biases, difficulties in dealing with big data sets, and the additional cost and time requirements. These weaknesses could be minimized but not easily eliminated. For example, it is possible to classify surveys and interviews where the people under investigation are aware of the experiment. However, situational and personal biases in the results could still result from other reasons. Further, it is possible to use unobtrusive data sources (archival records like memos, simple observation, videos, recordings) to achieve more comprehensive and complete data triangulation.

To be continued to the following week.

Authors’ Biography

Dr Jayantha N. Dewasiri is a Professor attached to the Department of Accountancy and Finance, Sabaragamuwa University of Sri Lanka. Further, he currently serves as the Brand Ambassador at Emerald Publishing, UK, and the Treasurer of the Sri Lanka Institute of Marketing. He can be reached at jayantha@mgt.sab.ac.lk

Telecommuting and Creativity of Professional Employees in Software Developing Industry in Sri Lanka

Employees’ creative thinking is imperative in pursuing organizational aspirations in a dynamic business environment. Organizational studies have long recognized that interpersonal relationships, frequent face-to-face interactions, mutual trust, support, and reciprocity are the important determinants of individual creativity.

However, with the developments of information technology, many organizations implement telecommuting as an alternative job design that enables employees to carry out job activities at remote locations.

Telecommuting, telework, teleworking, remote working, and work from home are often used interchangeably in describing a working design that involves members of an organization substituting a portion of their typical work hours to work away from a central workplace—principally from home—using technology to interact with others as needed to conduct work tasks.

Although the diminished presence and reduced quality of interactions should reduce the creativity of

GUIDED BY THE FINDINGS OF STUDY 1 AND THE INSIGHTS OF IDENTITY THEORY, THE SECOND PHASE OF THE STUDY WAS CONDUCTED TO EXAMINE THE EFFECT OF TELECOMMUTING ON THE NOVELTY AND USEFULNESS DIMENSIONS OF CREATIVITY. FOLLOWING QUANTITATIVE RESEARCH METHODOLOGY, WE GATHERED DATA FROM 246 PROFESSIONAL EMPLOYEES WHO ENGAGE IN TELECOMMUTING IN 16 SOFTWARE DEVELOPMENT COMPANIES IN SRI LANKA

telecommuters, a few recent studies found that telecommuting can foster individual creativity.

However, these studies lack theoretical and methodological rigor, thus, do not adequately comprehend the link between telecommuting and creativity.

This background motivated us to explore how telecommuting influences the creativity of professional employees who are working in software development companies in Sri Lanka.

While the catastrophic COVID-19 pandemic forced many companies to shift their work to telecommuting to meet the demands and restrictions brought forward by the pandemic, telecommuting was practiced in the software development industry even before the pandemic in Sri Lanka. To better explore the telecommuting and creativity link we conducted two separate studies. Notably, the data of our study were gathered before the COVID-19 pandemic.

In the first phase, we explored how participants perceive the telecommuting and creativity link employing the qualitative research approach.

Based on 17 semi-structured and in-depth interviews with professionals from the software industry, study 1 found telecommuting can have both favorable and unfavor-

able outcomes on creativity. On the one hand, positive feelings, better environment associated with telecommuting were perceived to be conducive to creative thinking by the respondents.

On the other hand, family demands, negative feelings such as isolation, reduced communication richness were perceived as the ways of reducing the creative thinking of telecommuters.

Further, respondents revealed that unique thinking and retained unique knowledge as a result of telecommuting help them to generate novel ideas. Also, they revealed that diminished interactions and knowledge sharing at telecommuting prevent the ability to develop useful and practical ideas.

Guided by the findings of study 1 and the insights of Identity Theory, the second phase of the study was conducted to examine the effect of telecommuting on the novelty and usefulness dimensions of creativity. Following quantitative research methodology, we gathered data from 246 professional employees who engage in telecommuting in 16 software development companies in Sri Lanka.

Study 2 found two important results. First, telecommuting activated professionals’ independent and unique thinking which in turn helped them to generate novel ideas. Second, the extent of telecommuting reduced the team identification of professionals which in turn harmed the usefulness dimension of creativity.

In other words, the extent of telecommuting reduces the values or desires of a person which have been derived as a result of the interactions with the team. The feelings of reduced team perspectives of the professionals resulted in diminishing the ability to develop ideas that have practical value. This finding supports the importance of frequent team interactions and the feelings of team belongingness in improving the usefulness dimension of creativity.

Looking at the findings of our

study, it is clear that telecommuting has both positive and negative effects on the creativity of professional employees. Whereas telecommuting helps to generate novel ideas it does not help to develop the usefulness of ideas due to the activation of different identities in telecommuting context.

Accordingly, the present research findings imply the importance of balancing collocated work at telecommuting to experience the unique advantages of both contexts in enhancing both aspects of creativity.

Our findings also imply the importance of capturing the two dimensions of creativity (i.e., novelty and usefulness) rather than viewing creativity as a uni-dimensional concept in understanding the determinants of creativity. Finally, the present study sheds new light on both



Dr. N.P.G.S.I. Naotunna



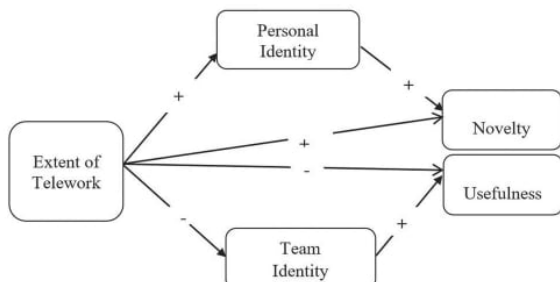
Prof. E. Zhou

the telecommuting and creativity fields, particularly in a time when discussions are going on about the continuation of telecommuting in many industries around the globe.

(This article is an extract of the research paper Naotunna, N.P.G.S.I., and Zhou, E. (2022). Telecommuting and Creativity of Professional Employees in Software Developing Industry in Sri Lanka. Asian Journal of Management Studies, Vol 02, Issue 01, pp. 28-45. Please refer to the original research paper for the detailed version: <https://ajms.sjoi.info/articles/abstract/10.4038/ajms.v2i1.42/>)

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Conceptual Framework