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The objective of the BSCAN is to encourage publication of contemporary research findings in Management and related areas, provide a forum for discussion on relevant national and international developments and disseminate information on emerging trends

The Journal is committed to upholding the vision and mission of the Institute in the decisions regarding the demarcation and selection of the editorial content. The criteria for evaluation of contribution for publication in the journal are indicated in the Guidelines for Authors given in the back inside cover of the journal

The broad structure of the editorial content is as follows

➢ Vichinthanam - An in-depth discussion by experts on a contemporary business/economic topic of national/international relevance, including a well-researched theme paper on the topic.

➢ A column on international Economic/Business scene

➢ Views of professionals/eminent businessmen on emerging issues/trends

➢ Research papers

➢ A Case study

➢ A book review

➢ Abstract of a very recent Ph.D. thesis

➢ The BSCAN does not owe responsibility for the views expressed by the authors.

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CONTENTS

Editorial

We are delighted to present the latest edition of BSCAN, featuring a diverse range of insightful articles that delve into the forefront of cutting-edge research and knowledge. As always, we strive to bring you valuable contributions from distinguished scholars and experts across various areas of management. The research works presented in this edition aim to shed light on crucial topics related to business management, and the environment that have far-reaching implications for society, technology, and human welfare. The journal includes a total of seven pieces of work, including one case study, one PhD abstract and a book review.

The article entitled "Technologies and Measures to Realize Adequate Carbon-Free Energy in the Country: An Overview" presents a comprehensive overview of the technologies and measures that can pave the way towards a greener future. As we tackle the challenges of transitioning to carbon-free energy, these insights offer a glimpse into the potential solutions that can make a lasting impact on our environment. Another article tried to expose the impact of personality traits on impulsive buying behaviour within the retail industry. The integration of gamification in human resource management is a fascinating concept that has gained traction in recent years. An article on gamification explores the potential benefits of gamifying HR processes to enhance employee engagement, boost productivity, and foster a positive work environment. An empirical investigation of workplace stress on employee well-being in the digital age delves into the impact of digitalization on employee well-being. By understanding the factors contributing to workplace stress, organizations can implement strategies to support their workforce and promote a healthy work-life balance.

A case study on social entrepreneurship for skill development in India highlights the successes and challenges faced by social entrepreneurs in their quest to empower individuals with valuable skills. The PhD abstract presents a rigorous study of the factors influencing the smartphone buying behaviour of this tech-savvy generation. In this edition's book review, we explore Peter Thiel's insightful book, "Zero to One," which delves into the art of startups and building a successful future. This review serves as a guide to understanding the key principles that can drive startups towards unprecedented success.

We hope that the research presented here will inspire you, spark new ideas, and encourage further exploration in your respective fields. As we bring this edition to your fingertips, we extend our heartfelt gratitude to the authors, reviewers, and our dedicated editorial team, whose passion for advancing knowledge has made this publication possible. We invite you, our readers, to join us in our commitment to fostering academic excellence and intellectual exploration. We look forward to continuing this journey of discovery together, as we strive to create a brighter and more sustainable future through research and innovation.

Thank you for your continued support.

Dr. Cyriac Joseph Vempala

TECHNOLOGIES AND MEASURES TO REALIZE ADEQUATE CARBON-FREE ENERGY IN THE COUNTRY: AN OVERVIEW

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ABSTRACT

In order to achieve a reasonable standard of living, the per-capita electrical energy consumption in our country must be increased to a value of around 5000 kWh. The increase needed in the corresponding installed power generation capacity is from the present value of 416 GW to around 1300 GW. The present power scenario in the country is described and the heavy dependence of coal-fired thermal power stations is brought out with the help of authenticated data. Thermal Power Station emits a huge quantity of greenhouse gases such as CO2. As per the Paris Agreement and our international commitment India should positively bring down the carbon dioxide emission. According to the Nationally Determined Contributions (NDCs), 50% of cumulative electricity generation in the country should be from carbon-free sources by 2030. Hence India needs to focus on carbon-free energy technologies which are supported by indigenous resources. Towards this, the measures being implemented and the research and development activities under progress in all the relevant areas are described in this article. The potential of renewable energy sources such as solar, wind and hydraulic power is highlighted. The importance of nuclear power, the present status and the growth plan envisaged are described. The relevance of energy storage and the main methodologies followed are explained in detail. This article is intended to sensitise the academic community especially the young engineers and managers about the need for focussing on the development of carbon-free energy technologies and energy storage systems.

Keywords

Electrical energy, power generation, renewable energy, solar power, wind power energy storage, CO2 emission

INTRODUCTION

Electricity is the most usable form of commercial energy available in the world today and is required for almost all activities of human life. Electricity is one of the major inputs for any industry and they need quality power consistently for sustained operation. The amount of electrical energy consumed per person per year is known as per-capita electricity consumption and is normally calculated for different groups of population such as states, countries and the entire world. The value of per capita electricity consumption of a group is an indicator of the standard of living or human development index of that population. In order to achieve a reasonable human development index and standard of living, the per-capita consumption must be increased from the present value of 1200 kWh [Government Of India,2023] in our country to a value of around 5000 kWh. The increase needed in the corresponding installed power generation capacity is from the present 416 GW [Government Of India, 2023] to around 1300 GW. The growth of power generation is very fast since independence and it is going to be much faster in the next two decades. Electricity is generated from different sources in our country. However, around 80 % of the electricity generated today is from fossil fuel-fed thermal power stations [Government of India,2023]. Thermal power stations emit huge quantities of greenhouse gases to the environment. Emission of greenhouse gases such as Carbon dioxide and the resultant global warming is the major challenge, human society is facing today. India is committed to the agreement formulated in the UN Climate Change Conference held in Paris, in 2015 and needs to achieve an installed capacity level of 50% from renewable and carbon dioxide emission-free

sources. This article reviews the present state of the Indian power generation scenario and also highlights the measures being implemented in our country to meet the power requirement in an environmentally friendly manner based on the NDC.

2. POWER POSITION IN INDIA

Table 1: Installed Generation capacity as of 31-03-2023

SOURCE	MW	MW
Thermal		
Coal	205235.50	
Lignite	6620.00	
Gas	24824.21	
Diesel	589.20	
Thermal Total		237268.91
Nuclear		6780.00
Hydro		46850.17
RES		125159.81
Grand Total		416058.89

Source: Executive Summary on Power Sector, Central Electricity Authority, Power
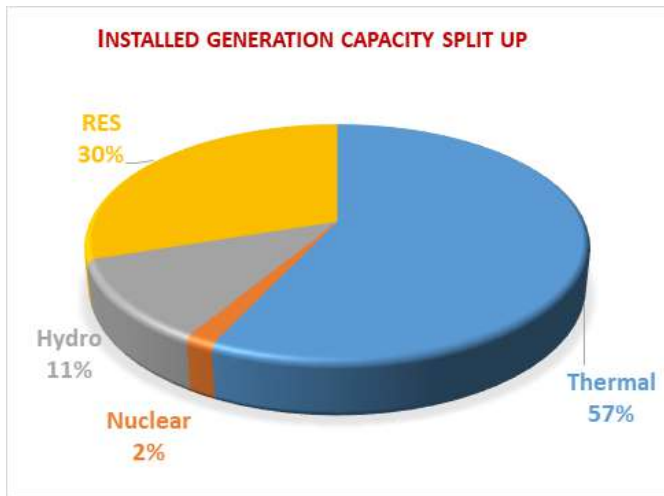
Sector Government of India, March-2023

Fig. 1: The Split Up of Installed Power Generation Capacity

Power generation in India is taking place in the central sector, state sector and private sector. Central Electricity Authority (CEA) is the sole authority controlling technically and administratively all the power stations in the country. All the power stations are connected to the power grid and Power Grid Corporation of India Ltd.(PGCIL) is controlling the grid. Electricity boards of the states and utilities are involved in transmission and distribution with the overall control of

PGCIL. Table 1 gives the installed power generation capacity in India as on 31st March 2023. Fig.2 shows the split up of installed power generation capacity

In addition, we have a captive power generation capacity of around 78,000 MW. Captive power stations are thermal, hydro, solar wind or diesel-based power stations owned and operated by individuals or industries for their own use. Excess power from these power stations will be supplied to the grid based on availability.

Source	% of Grand total installed capacity	Amount of Energy generated in Billion Units (kWh)	% of Energy generated
Thermal	57.02	108.30	79.01
Nuclear	1.60	4.02	2.93
Hydro	11.30	7.77	5.67
Renewable	30.10	16.97	12.38
Total	100	137.06	100

Source: Executive Summary on Power Sector, Central Electricity Authority, Power Sector Government of India, March-2023
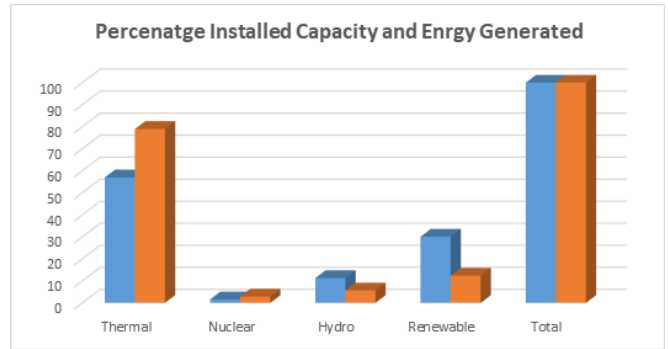

Fig. 2: Installed Capacity and Energy Generated

Out of the total installed capacity, 57.02 % is thermal power stations based on fossil fuels which emit harmful carbon dioxide and other greenhouse gases. Nuclear is only 1.6 %, hydro 11.3 % and Renewable Energy Sources (RES) are of the order of 30.1 %. The majority of the thermal power stations are coal based (86.5%). The electrical energy generated by each power station depends on the Plant Load Factor (PLF). The plant load factor of Nuclear power stations and thermal power stations are relatively high as they are operated as base load stations for functional and economic reasons. The PLF of renewable energy sources such as solar and wind are very low because they are seasonal and intermittent in nature and depend on the availability of

sunlight and wind. The energy generated in the month of March 2023 from each of the RE sources is given in Table 2. Fig.2 shows the comparison of Installed Capacity with Energy Generated. Even though the percentage of thermal installed capacity is 57.02, 79.01 % of the energy generated is from thermal power stations only. The installed capacity of nuclear power stations is only 1.60 % but the energy generated is 2.93 %. The installed capacity of renewable energy is 30.10 %, but the energy generated is only 12.38 %. Table 2 clearly shows the heavy dependency on fossil fuel-fired thermal power stations in our country today.

3. EMISSION OF GREENHOUSE GASES FROM THERMAL POWER STATIONS

The quantum of emission of carbon dioxide and other greenhouse gases will vary from plant to plant, the quality of coal used and the thermal efficiency of the plant. The carbon dioxide emission per unit of electricity produced from Indian coal-based power stations is around 1kg/ kWh. The volume of one kg of CO_2 at NTP is 605 litres. The amount of thermal power generated in the financial year 2022-23 in India is 1206.15 billion units and it corresponds to an emission of approximately 1206.15 million tons of carbon dioxide. The amount of coal consumed in the thermal power stations in the financial year 2021-22 is 700 million tonnes [Government of India,2023]. The issue of greenhouse gas emission and associated global warming and its consequences were discussed in detail at the UN Climate Change Conference held in Paris, France, on 12th December 2015. The Paris Agreement is formulated and released in the conference which a legally binding international treaty on climate change. It was adopted by 196 parties. It entered into force on 4th November 2016. Its goal is to hold the increase in the global average temperature rise to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. To limit global warming to 1.5°C, greenhouse gas emissions must peak before 2025 at the latest and decline to 43% by 2030. Towards this, a country like India submitted their action plan as Nationally Determined Contributions (NDCs). India submitted its NDC in August 2022 . As per the NDC India is planning to achieve about 50 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with the help of the transfer of technology and low-cost international finance including

from the Green Climate Fund (GCF). India is also planning to create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030. India's existing NDC is a step forward, towards our long-term goal of reaching net-zero by 2070.

4. MEASURES TO MEET OUR NDC

In order to meet the international commitment, we have to increase the installed capacity based on Renewable Energy, Hydro and Nuclear sources.

4.1. RENEWABLE ENERGY SOURCES

Table: 3 gives the amount of electrical energy generated from different renewable sources. Fig.3 shows its graphical representation. Renewable energy generated by different methods from Table 3 it is clear that wind and solar are the main renewable energy contributors of today. India has an ambitious target of installing 500GW renewable energy plants by 2030 out of which 250 GW is from solar and 140 GW is from wind.

TABLE 3: ALL INDIA GENERATION FROM RENEWABLES

Sl. No	Source	Generation in MU in Feb 2023	Percentage Contribution
1	Wind	3126.99	20.05
2	Solar	9555.41	61.26
3	Biomass	290.22	1.86
4	Bagasse	1862.92	11.94
5	Small hydro	560.81	3.60
6	Others	203.01	1.30
	Total	15599.36	100

Source: Executive Summary on Power Sector, Central Electricity Authority, Power Sector   Government of India, March-2023
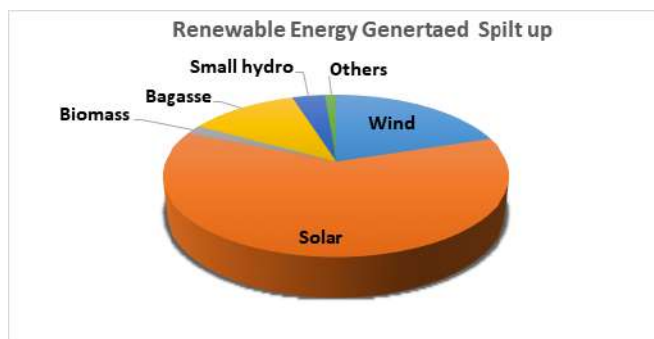

Fig. 3: Renewable Energy Generated by Different Methods

4.1.1. WIND POWER

The national institute of Wind Energy under the Department of the Ministry of New and Renewable Energy (MNRE) is the agency responsible development

of wind power in India . The total installed capacity of wind power stations in India is 42.63 GW as on 31st March 2023. The energy generated in the financial year 2022-23 is 71894 GWh. India is the fourth largest producer of wind power in the world. The price of wind power in India is gradually coming down and the latest tariff is Rs. 3.17 per kWh. The overall wind power potential estimated is 305 GW at 100 m and 695 GW at 120 m elevation from the ground. Wind power available at any point is directly proportional to the third power of wind speed at that point. The largest wind farm in India is at Muppandal in Tamilnadu, Kanyakumari district which has an installed capacity of 1500 MW. The plants are operating now at a capacity utilization factor of below 20%. R& D activities are in progress to increase the generation capacity of single-win turbines and also to increase the overall capacity utilisation factor.

4.1.2. SOLAR POWER

The solar energy that falls from the sun, in one and a half hours is equal to the energy requirement of the entire population in the world for a year. The National Institute of Solar Energy under MNRE has assessed the potential of around 750 GW of solar power by utilising 3 % of wasteland in the country. When light falls on semiconductor-based Photo Voltaic cells of the solar panels it creates electric charges and which move due to an internal electrical potential in the cell. The installed capacity of solar power plants as on 31st March 2023 is 66.78 GW which is the fourth position in the world. The total amount of energy generated in the financial year is 102,014.24 GWh. The discovered minimum tariff of solar power in April 2023 was Rs. 2.55. The efficiency of solar power panels was around 15 % initially and because of the recent development in photovoltaic technology, the efficiency has increased up to 23 %. The increase in efficiency has caused an increase in the power rating of single panels up to 420 W. Off-grid solar power plants with batteries for storing energy and on-grid power plants which are tied to the local power supply grid are the two types of solar plants deployed in India. The international solar alliance is a global organisation of 123 sunshine countries as signatories. The objective of the organisation is to work for efficient generation and consumption of solar energy in the world. The headquarters of the organisation is at the National Institute of Solar Energy, Gurugram, Haryana, India. The government of India and state governments have launched various schemes in support of the installation of solar power plants. As a part of the diversification process, National Thermal Power Corporation (NTPC) is involved in the installation of large solar power plants in India. Floating solar panels in dams have higher energy efficiency compared to installed panels on the ground due to the control of panel temperature by waterbodies. The panels will be installed on a ferro cement floater to move in accordance with water movements. There are many floating panel solar power stations in India which are successfully installed and operated.

4.2 NUCLEAR POWER

Nuclear power is the only carbon-free energy source which can operate at a plant load factor of nearly 90% and produce energy throughout the day and night. The installed capacity as of today is 6780 MW which is only 1.6 %. However, the energy produced is around 3%. India has an ambitious nuclear power programme with indigenously developed Pressurised Heavy Water Reactor (PHWR) technology and nuclear power plants based on Pressurised Water Reactor (PWR) technology with international support. India mastered PHWR technology and the standardised 700 MW unit of power plant is commissioned at Kakarpar Gujarat in 2022. Five more such 700 MW units are at the advanced stage of construction. 10 more units are sanctioned and are in the process of commencement of construction. With international support four nuclear power plants of 1000 MW each are under construction at Kudankulam, Kanyakumari in Tamil Nadu. A few more plants under international tie-up are planned in different parts of the country and are being negotiated with suppliers on technical and financial aspects. The Department of Atomic Energy has given a target of achieving 20 GW installed capacity by 2030. By 2047 India should be using 9 % of its energy from nuclear sources. In the long run by effective utilization of available uranium and thorium resources in our country by recycling through fast breeder reactors, the entire energy requirement of the country can be met for many years as per the projection. Research and development activities under various domains, towards making nuclear power safe and economic are in progress at Baba Atomic Research Centre (BARC) and Nuclear Power Corporation of India Ltd. (NPCIL).

4.3 HYDROPOWER

The installed capacity of hydropower plants in India as on 31st March 2023 is 46850.17 MW from 197 plants.

The amount of energy produced from hydroelectric stations in India in the financial year 2022-23 is 162 billion units. Our estimated viable hydraulic power potential is 147,700 MW at a plant load factor of 60 %. The global position India is 5 among the countries generating hydroelectric power. Hydropower plants of capacity equal to and less than 25 MW are classified as small hydroelectric plants. The location of possible hydroelectric power stations is in remote areas and is far away from the load centres in the urban area of the country. High transmission losses, environmental impact and lack of public acceptance are the hurdles of hydropower.

The augmentation of existing hydropower plants is considered as the solution to achieve high generation capacity. For example, to meet the peak hour demand in Kerala, in an economic and efficient manner, M/s KSEBL has come up with a new proposal of a second powerhouse at Moolamattom, Idukki. At present, 6 units of 130 MW each are being operated from Moolamattoon underground power station. It is planned to double the installed capacity by adding another 6 units of 130 MW each. The existing Idukki reservoir itself has been chosen as the water source for the new powerhouse. The power ministry of the Government of Kerala has taken the initiative and recently awarded a consultancy contract to M/s Water and Power Consultancy Services (India) Limited (WAPCOS) a PSU under the union ministry of Jal Sakthi to assess the feasibility and also to prepare the DPR. This additional power station can act as a reserve and also address a flood-like situation effectively. Currently, the power station is generating 1000 million units during peak hours (6 PM to 11 PM) and 1200 million units during off-peak hours. After the installation of the second powerhouse, KSEBL is planning to produce 2000 million units during peak time and 200 million units during off-peak hours. The rough estimated cost of the project is 2700 cores. The water discharge from the dam will double during the peak time. However, there will not be any change in the total discharge from the reservoir per day as KSEBL is scaling down the off-peak generation in proportion to the hike in peak power production. This arrangement would not upset the ecological flow of the water required through the rivers down the dam and the irrigation projects down the line. This will ensure that the state can make use of the optimum power generation from the dam during peak time. The feasibility of adopting this methodology at

other hydroelectric power stations to meet the peak demand should be studied.

4.4. CLEAN COAL TECHNOLOGIES

Even with all the possible installed capacity addition of renewable energy sources and nuclear power to the extent possible, coal-based thermal power stations will remain the mainstay for another two decades. To limit the carbon dioxide emission from the existing thermal power plants and to install new power stations with less emission better technologies are to be adopted. By cleaning the coal which is used as the fuel the emission of carbon dioxide can be limited. This also reduces the emission of harmful gases such as SO2, NO2 etc. Technologies are being developed towards this. A lot of research work is going on globally for a long time, to minimize the environmental impacts of various processes related to coal. Clean Coal Technology (CCT) is an umbrella term, encompassing a wide array of technologies and innovations that can help to reduce various emissions such as fly ash, particles and gasses such as carbon dioxide (CO_2), carbon mono oxide (CO) and nitrous oxides (NOX) etc. from the coal industry [Ananth P Chikkatur and Ambuj D Sagar,2007]. There are still concerns regarding the economic viability and overall feasibility of these technologies and the timeframe of delivery. There are numerous CCTs aimed at minimization of environmental impacts during various processes in the coal life cycle. The typical CCT alternatives for three major processes in the coal life cycle namely coal preparation, coal burning and carbon capture and storage (CCS). The CO_2 gas has to be collected at the origin, compressed, transported and injected into suitable geological formations for permanent storage. The geological formations such as deep saline formations, depleted oil and gas reservoirs, un-minable coal beds and abandoned mines are considered suitable for CO_2 injection and storage.

4.5 ADVANCED ULTRA-SUPERCRITICAL THERMAL POWER STATIONS [Kyle Nicol,2013]

In pulverised coal combustion (PCC) power plants, increasing the maximum temperature of the steam cycle increases the electrical efficiency, which in turn lowers both coal consumption and flue gas emissions. However, the maximum steam temperature is limited by materials that can operate at these conditions for practical service lifetimes without failure. The EU, USA, Japan, India and China all have material research

programmes aiming for the next generation of increased steam temperatures and efficiency, known as Advanced Ultra Super Critical (AUSC) or 700°C technology. Increasing PCC plant electrical efficiency guarantees lower coal consumption, resulting in reduced fuel costs and helping to sustain valuable coal resources. The thermal efficiency of an AUSC power plant will be around 50%. The quantity of coal required for unit electrical energy production will be around 300g only. The carbon dioxide emission per unit of energy will be coming down to 660g/kWh. Higher electrical efficiency also lowers the amount of flue gas to be treated in the flue gas cleaning systems and lowers the carbon tax. Higher electrical efficiency will also assist in the deployment of carbon capture and storage (CCS). This is because higher electrical efficiency improves the economic viability of CCS.

4.6 PROTECTING FOREST AND TREE PLANTATION

The natural process of capturing and storing carbon dioxide is generally known as Carbon sequestration. The natural way of carbon sequestration is taking place in trees and plants. Trees take carbon dioxide from the atmosphere for the process of photosynthesis and produce carbon-containing chemical compounds which are the food for the tree to sustain. During this process tree releases oxygen into the atmosphere. On average a typical grown-up tree can absorb around 21 to 31 kg of carbon dioxide per year. Teak trees and bamboo trees have the maximum carbon sequestration capacity in India. The total carbon dioxide absorbed by a tree in its lifetime can be calculated from the weight of the trunk, leaves roots and the fruits it yielded during that lifetime. The sequestration rate is proportional to the growth rate of the plant. Ocean also absorbs CO2. Availability of sunlight, water content in the soil and ambient temperature are the main factors affecting photosynthesis. To determine the weight of carbon dioxide sequestered by the tree, the weight of carbon in the tree should me multiplied by 3.67, the constant worked out based on the molecular weight of CO2 and C.

5.   RELEVANCE OF ENERGY STORAGE SYSTEMS

The carbon-free major renewable power source is solar and wind. They are seasonal and intermittent in nature. Solar power is not available after sunset and throughout the night. During day time also climatic conditions and cloud movements affect solar power generation. Formation of wind above the threshold value of the velocity is not taking place always. So, solar and wind power generation has very low plant load factor and they

are not available to meet the peak demand for power which is from 6 PM to 11 PM normally. Not only that the intermittent nature of solar and wind power will pose instability problems to the power supply grid. A major share of Hydraulic power stations and base load nuclear power stations in the power mix alone cannot address these problems. If nuclear or thermal power stations operate mainly to meet the peak load there are technical difficulties and they will not be economical too. So, storage of an electrical energy system which is connected to the grid is the requirement to achieve a reliable power supply with a renewable energy power source. To address this various energy storage methods are in use globally. They are pumped storage hydropower, Lithium-ion batteries, Lead-acid batteries, compressed air energy storage, thermal energy storage, mechanical flywheels and hydrogen energy storage. The power generated during off-peak hours would be stored in the system and it will be used during peak hours without any time delay.

5.1 PUMPED STORAGE HYDROPOWER

In the Pumped Storage Hydropower (PSH) system, water at the low-elevation reservoir close to the generating station is pumped to the reservoir at a higher elevation causing an increased potential energy. The pumping of water is done during off-peak hours when solar/wind power plants generate surplus power and the power tariff is relatively low. An additional water reservoir at a lower elevation close to generating station is needed to store the water from the tail race. The reservoir at a higher elevation is used for pumped water storage. During peak hours when electricity is needed, the water in the dam is released through the turbine, coupled to the generator to produce power. The difference in tariff between peak hours and off-peak hours makes it economical. Turbines/Pump sets of PSH with adjustable speeds are more responsive to the stability needs of the power grid. A closed-loop PSH system can operate without a continuous water supply source, however, evaporation and other water losses have to be compensated. Closed loop PSH system has the option to consider it for any location.

PSH systems are suitable for large-capacity energy storage. PSH is the most generally used, commercially viable energy storage technology for grid-level applications and it accounts for 94% of the globally available grid energy storage capacity. It is cheaper compared to lithium-ion battery storage for the range of capacity. The overall energy efficiency of the PSH

system is around 80%. The advantages of PSH are effective load balancing to the grid, minimum impact on the environment, high service life, high operational flexibility and low response time. Hence pumped storage plants are considered the best available option along with existing operational power stations and forthcoming RES projects to maintain the stability of the grid. The main advantages of PSH are it can address the intermittency and seasonality of wind and solar power plants and have the capacity for energy storage for a long duration of time. It is possible to Integrate with existing hydropower stations by using existing reservoirs. The main disadvantages are high capital cost for civil works and equipment, long construction period, and Impact on the environment due to additional water reservoir Fig.4 shows the layout of a Pumped Storage Hydropower system [Pavlos Nikolaidis,2017].
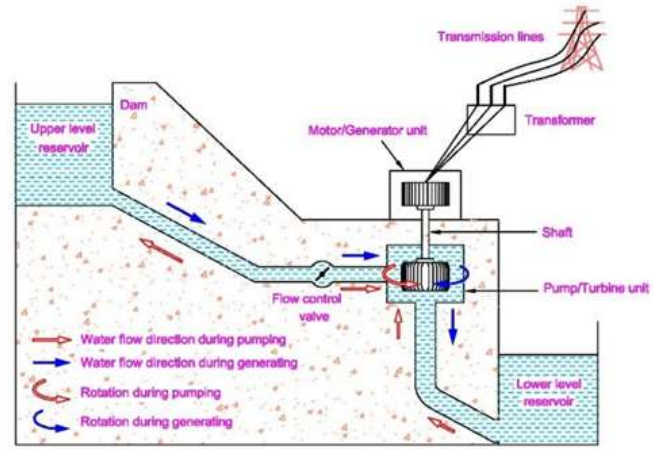
5.1.1. PSH IN THE WORLD

As per International Hydropower Association (IHA), PSH stations are available globally to store 9000GWh of electrical energy now . The total installed capacity of pumped storage hydropower in the world is estimated at 160GW. There is a resurgence of interest in the PSH technology and globally more than 100 projects are in the pipeline now. IHA estimates an increase of PSH installed capacity to 240 GW by 2030. PSH is proven as an ideal solution to the growing challenges faced by grid operators due to the speedy introduction of variable RE plants.

5.1.2. PSH IN INDIA

There are eleven PSH plants in India now. The total installed capacity of PSH is 4804 MW. Out of the 11, three are not working on PSH mode because of the non-availability of the lower reservoir [Pavlos Nikolaidis ,2017]-[Arun Kumar,2018]. Another plant is having a vibration-related problem. In addition, PSH schemes are planned in eight of the existing hydroelectric power stations totalling a capacity addition of 6725 MW. New PSH plants are planned at eight other locations in the country amounting to a capacity addition of 8425 MW. So, the total capacity PSH plant under the planning stage in India is 15150 MW. The estimated potential of pumped storage plant capacity in India is 96,524MW. Sixty-three sites are identified covering all the regions of the country. Fortunately, most of the seven RE-rich states of the country also have the maximum potential for PSH too [Pavlos Nikolaidis,2017].

Fig.4: Pumped Storage Hydro Power System Layout

5.1.3. PSH IN KERALA

KSEBL has studied the possibility of PSH in the existing hydropower stations in Kerala. Ten potential sites are identified and the power potential estimated is 5075MW. Fig.5 gives the details [Er.Biju PN , 2018]
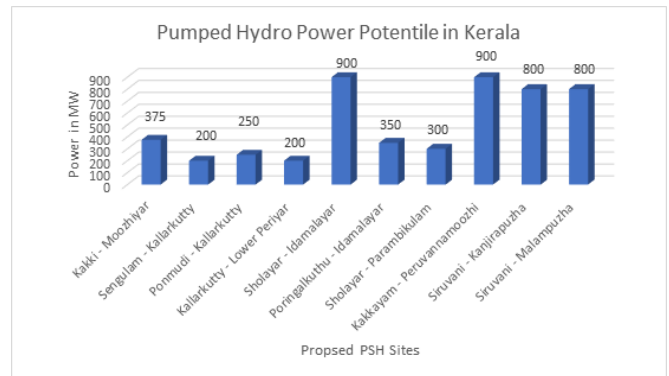
Fig.5: PSH potential in Kerala

5.2. LITHIUM-ION BATTERIES

For the historic development of Lithium-ion batteries, the Nobel Prize in Chemistry is awarded to Mr John B. Goodenough, the University of Texas at Austin, USA, Mr Stanley Whittingham, Binghamton University, New York, USA and Mr Akira Yoshino, Asahi Kasei Corporation, Tokyo, Japan, by the Royal Swedish Academy of Sciences in 2019 [The Royal Swedish Academy Of science , 2019].

This rechargeable, powerful and lightweight battery is now used in electronic devices and electric vehicles. This battery also can be used for storing large amounts of electrical energy from wind and solar power stations during off-peak periods and make it available during

peak hours.

Fig. 6: Schematic of Lithium-ion Cell

The research on Lithium-ion based battery was commenced during the international oil crisis that occurred in the 1970s. Mr Stanley Whittingham started working in different areas with the intention to develop fossil fuel-free energy generation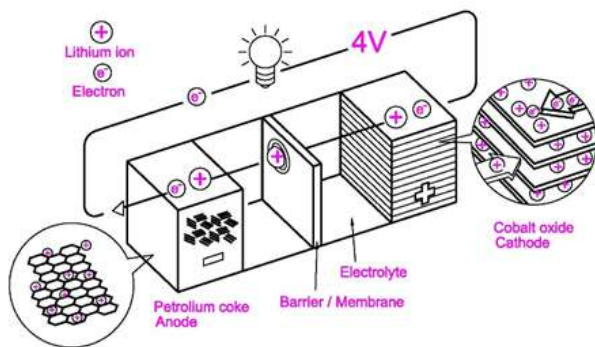 technologies. As an outcome of his research, he found an energy-rich material, which he has used to make an innovative cathode in the Lithium-ion battery. This material was prepared from Titanium di-sulphide, which at its molecular level possesses spaces that can intercalate Lithium ions. The first technically and commercially viable lithium-ion battery was developed by Mr Akira Yoshino. He used lithium-cobalt oxide proposed by Mr Goodenough in the cathode which can also intercalate lithium ions and a carbon material, petroleum coke in the anode. The functionality of the battery is not based on any chemical reactions which give a long life for the battery. During the charging and discharging of the battery, the Lithium ions flow forward and backwards between the electrodes through the electrolyte. Fig. 6: shows the schematic of a Lithium-ion Cell[Pavlos Nikolaidis, 2017]

Lithium-ion batteries are the most popular batteries-based energy storage systems today. It controls around 90 per cent of the worldwide, battery-based energy storage market. This is mainly because of its superior characteristics. Innovations are in progress to make Lithium-ion batteries more competitive for large quantities of energy storage for longer duration. In rural communities and in remote areas, Lithium-ion batteries coupled with small solar power plants allow people to charge mobiles, run appliances and light buildings. This has become a substitute for expensive diesel generators or heavy and bulk lead acid batteries. However, the R & D on manufacturing and recycling Lithium Ion batteries is

in the preliminary stage. India is now importing lithium-ion batteries. Most of the battery-supported wind and solar-based power stations are using lead-acid batteries.

In Southern Australia, the Hornsdale Power Reserve is the largest Lithium-ion battery ever made and is used to back up the electrical grid which is connected to a wind power farm. This 100 MW capacity Lithium Ion battery system was built by Tesla. The development of Lithium-ion batteries has encouraged the development of cleaner energy generation technologies, and electric vehicles and contributed to reduced emission of carbon dioxide to the atmosphere.

6. CONCLUSION

The current position of the Indian power scenario is explained with authenticated data. The heavy dependency on thermal power stations is indicated. In order to achieve reasonable living standards for all the citizens, per capita electrical energy consumption and installed capacity have to be increased. In order to limit the carbon dioxide emission and also to honour our International commitment, RE sources such as wind and solar have to be harnessed to the extent possible and fossil fuel-based power stations have to be phased out. The seasonality and intermittency of RE sources have to be addressed by tying up with efficient and high-capacity electrical energy storage systems to the grid. PSH systems and lithium-ion battery banks are the most common energy storage systems and are comparatively more relevant in India. Technical details of these two energy storage systems and their potential in the Indian situation are explained in detail. The potential of hydropower and an innovative strategy for augmenting existing hydropower stations to address the peak demand is described. In the present scenario Implementation of energy storage systems assumes importance and should go in parallel with the addition of RE power generation plants. Adequate energy storage systems have to be installed and connected to the grid, which ensures grid stability. Delays in the implementation of energy storage systems may lead to curtailing or shutting down RE-based power generation units. With the effective participation of the academic community, the measures taken for generating adequate carbon-free electrical energy to ensure its reliability and availability should be strengthened.

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UNVEILING THE IMPACT OF PERSONALITY TRAITS ON IMPULSIVE BUYING BEHAVIOR WITHIN THE RETAIL INDUSTRY

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ABSTRACT

Psychology today explains that the urge to spend money impulsively is deeply ingrained in human DNA. Factors such as the pleasure derived from buying (linked to dopamine release) and the fear of missing out on discounts or special deals contribute to impulsive purchases. Identifying specific personality traits associated with consumer behavior is valuable for firms in developing market segmentation strategies. Personality encompasses individual differences in thinking, feeling, and behaving and can be categorized into traits like Extraversion, Conscientiousness, Agreeableness, Neuroticism, and more. The Big Five personality traits, including openness, conscientiousness, extraversion, agreeableness, and neuroticism, remain relatively stable throughout life and are influenced by both genes and the environment. Analyzing these traits can predict significant outcomes like education and health. Openness to experience involves creative imagination and intellectual curiosity, while conscientiousness relates to productivity, attention to detail, and responsibility. Regarding impulsive buying behavior, previous studies have identified other influencing factors apart from personality traits, such as the store environment, promotional factors, and shopping experiences. Understanding these elements can provide a comprehensive view of consumer behavior. The present study tried to expose the impact of personality traits on impulsive buying behavior within the retail industry.

Keywords: *Impulsive Buying, Personality Traits, Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism.*

INTRODUCTION

In the realm of consumer behavior, the individual's personality and traits take centre stage as influential factors impacting their purchasing decisions. For generations, astute marketers have delved into the intricacies of personality differences and diverse attributes among consumers, seeking to launch innovative products, understand evolving preferences, consumption patterns, and decision-making processes. Thus, it becomes imperative to recognize and appreciate the rich tapestry of traits and personalities exhibited by consumers. By doing so, businesses can forge deeper connections and cater more effectively to their unique needs and desires.

The profound importance of comprehending how various personality traits sway the purchasing inclinations of prospective consumers was first recognized as early as the 1940s. Since then, the influence of personality on consumer behavior has been a subject extensively explored and debated by researchers. As the landscape evolves with shifting market competition and changing consumer preferences, understanding these dynamics has become invaluable for industries seeking to craft effective marketing and advertising strategies. By delving into the factors that impact consumer buying behavior, businesses can tailor their approaches to resonate with their target audience and remain at the forefront of an ever-changing market.

The dynamics of personality make it an interesting area of study, especially when it comes to understanding underlying traits that influence how we talk about and describe a person. In the context of business and marketing studies, understanding these personality

traits can be highly beneficial. Consumers, as dynamic beings, are individuals who purchase goods or avail services for their personal needs or to engage in self-employment. However, consumers are subject to change in their interests, needs, and preferences, making it crucial for marketers and researchers to stay updated about consumer behaviors and responses to stimuli.

Consumer Behavior, a topic of perpetual curiosity, involves studying the buying tendencies of consumers. It is a multi-stage process influenced by cultural, social, personal, and psychological factors, among others. Impulse buying is a sudden, voluntary, and impulsive purchase behavior characterized by high-speed decision-making and reduced investigation of information and choices. This behavior is driven by emotional and cognitive forces and is difficult to avoid.

2. BACKGROUND OF THE STUDY

Consumer behavior has been a subject of study for many years, and numerous relevant studies have been conducted in this area. As human behavior is dynamic and constantly evolving, staying updated on changing consumer trends can be immensely beneficial for marketers. Understanding how personality traits influence consumers' purchasing choices is particularly intriguing and can have practical applications in real-life scenarios. Conducting a thorough study on this topic can provide valuable insights for researchers.

2.1 Research Focus:

The focus of this study is to explore "The impact of personality traits on consumer impulsive buying behavior" among consumers in the Kerala region. By delving into this topic, the study aims to analyze how various personality traits influence impulsive buying tendencies. Additionally, the research will investigate other factors and dimensions that may also contribute to impulsive behavior. As part of the investigation, gender differences will be examined to gain a comprehensive understanding of consumer behavior in the context of impulsive buying.

3. SCOPE OF THE STUDY

This study aims to explore and understand the individual differences in consumers' consumption patterns and the role of various personality traits in impulsive buying behavior. By investigating these aspects, marketers can gain valuable insights into the market conditions and comprehend the varying preferences in consumption patterns. Furthermore, the study seeks to examine how certain products' instant gratification properties influence consumer buying behavior. Understanding the relationship between personality traits and impulsive behavior is of great significance for long-term marketing strategies. The findings from this study will contribute to a deeper understanding of consumer behavior, enabling businesses to make informed decisions and enhance their market strategies.

4. OBJECTIVES OF THE STUDY

The objectives of the present study are the following:

- To examine the impact of personality traits on consumer's impulsive buying behavior.
- To determine the role of gender in consumer's impulsive buying behavior.

5. REVIEW OF LITERATURE

Seounmi Youn and Ronald J. Faber (2000) conducted a study on "Impulse Buying: Its Relation to Personality Traits and Cues," exploring the connection between impulse buying tendencies and three personality traits: lack of control, stress reaction, and absorption. The research identified various internal states and environmental/sensory cues that trigger impulse buying, including respondents' positive and negative feeling states, atmospheric cues in retail settings, marketer-controlled cues, and marketing mix stimuli. The study also examined the differences between high and low impulse buyers in their sensitivity to different cues and the relationships between personality traits and specific impulse buying cues.

Asad Shahjehan, Jaweria Andhleeb Quershi, Kaleem Zeb & Kaleem Saifullah (2012) investigated "The effect of personality on impulsive and compulsive buying behaviors." The study analyzed the impact of Big Five Personality Traits (extraversion, agreeableness, conscientiousness, openness, and neuroticism) on impulsive and compulsive buying among 640 students from a public sector university. The research findings revealed interesting insights into the relationships between individual personality traits and impulsive and compulsive buying behaviors, as well as the influence of age and educational level on buying tendencies.

Geetha Mohan, Bharadhwaj Sivakumaran, and Piyush Sharma (2013) conducted a study titled "Impact of store environment on impulse buying behavior," investigating the influence of store environment factors

on impulse buying behavior. The study analyzed the role of four store environment factors (music, light, employee, and layout) and two individual characteristics (shopping enjoyment tendency and impulse buying tendency) in influencing impulse buying behavior through positive and negative affect and the urge to buy impulsively. The research used a structural model tested with AMOS and found that store environment factors and personality variables significantly influenced impulse buying behavior through positive affect and the urge to buy impulsively.

Parmar Vishnu & Ahmed Rizwan Raheem (2013) conducted a quantitative study titled "Factors Influencing Impulsive Buying Behavior" in Larkana and surrounding territories in Pakistan. The research focused on FMCG (Fast Moving Consumer Goods) products and explored the influence of factors such as free product offers, price discounts, income levels, and visual merchandising on consumer impulse buying behavior. The study revealed that consumers in Pakistan were more likely to buy impulsively when presented with free product offers and price discounts. Additionally, income levels and visual merchandising significantly influenced consumer impulse buying behavior for FMCG products.

Edmund R. Thompson & Gerald P. Prendergast (2015) conducted research on "The influence of trait affects and the five-factor personality model on impulse buying." Their study examined how trait affect predicts impulse buying, controlling for state affect, and investigated the predictive role of extraversion, conscientiousness, and neuroticism on impulse buying. The findings showed that trait affect had a significant influence on impulse buying, but this influence was fully accounted for by the five-factor personality model. Extraversion, conscientiousness, and neuroticism consistently predicted impulse buying behavior.

Mohamad Saad & Madiha Metawie (2015) conducted a study titled "Store Environment, Personality Factors, and Impulse Buying Behavior in Egypt: The Mediating roles of Shop Enjoyment and Impulse Buying Tendencies." The research investigated the relationships between store environment factors, personality factors, and impulse buying behaviors in Egypt. The study found that personality factors such as impulsivity, excitement, and esteem, along with shop environment factors like music and layout, significantly influenced impulse buying behavior. The impulse buying tendency was identified as a full mediator between personality factors, shop enjoyment, and impulse buying behavior.

Sanjeev Prashar, Chandan Prasad & T. Sai Vijay (2016) conducted a cross-sectional study titled "Segmenting Young Indian Impulsive Shoppers" to segment and profile young impulsive shoppers based on behavioral, attitudinal, and situational factors. The research involved 448 young shoppers aged 18–35 years from Delhi, Mumbai, Chennai, and Kolkata, India. The study identified five different shopper segments based on antecedent factors and established a relationship between income levels and the motives behind impulsive shopping.

Umair Akram, Peng Hui, Muhammed Kaleem Khan, Muhammad Hashim & Shahid Rasheed (2016) explored the relationship between store atmosphere and impulse buying behavior in their research paper "Impact of Store Atmosphere on Impulse Buying Behavior: Moderating Effect of Demographic Variables." The study involved over 700 shoppers from eighteen mega stores in Pakistan. It revealed a positive and significant influence of store atmosphere on impulse buying behavior. Additionally, age was found to moderate the relationship between store atmosphere and impulse buying, while other demographic variables like gender showed insignificant relationships.

Dania Shakaib Farid & Mazhar Ali (2018) conducted a research study titled "Effects of Personality on Impulsive Buying Behavior: Evidence from a Developing Country," examining the impact of personality on impulse buying behavior. The research measured the effects of five personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) on impulse buying. The study involved 400 individuals from diverse backgrounds and age groups. Results indicated significant effects of Openness, Extraversion, Conscientiousness, and Neuroticism on Impulse Buying Behavior, with Agreeableness showing an insignificant effect.

Mitushi Sharma, Radhika Rana, Shambhavi Tripathi, Dr. Ashwini Kumar (2020) conducted a quantitative comparative study on "The study of impulse buying behavior in context with age, gender, and marital status." The research aimed to comprehend and examine impulse buying behavior among different age groups, genders, and marital statuses. The study involved 71 participants from North India and used

statistical techniques like Descriptive measures and 't'-test for data analysis. The results showed significant differences in impulse buying behavior among different age groups, gender, and marital status. Female participants who were unmarried and below 30 years of age exhibited higher impulse buying behavior compared to men. The study shed light on the impact of demographic variables on impulse buying behavior.

6. THEORETICAL FRAMEWORK

Personality, as defined by the American Psychological Association (APA), refers to individual differences in characteristic patterns of thinking, feeling, and behaving. These differences are often described using specific traits that individuals possess, shaping their identities and behaviors. Trait theories have long been used to identify key dimensions of personality and understand how people differ significantly from one another, thereby relating such differences to dominant forms of behavior.

6.1. Big Five Personality Model

Among various trait theories, the Big Five Personality model has emerged as a central framework. This model, developed by Lewis Goldberg of the Oregon Research Institute, has been widely utilized in psychological research and by businesses as a comprehensive personality scale. In this study, the researcher has adopted the Big Five personality traits as the independent variable, while impulsive buying behavior is the dependent variable. Previous studies have shown positive relationships between some of these personality traits and consumers' impulsive buying behavior.

- Openness to experience: Ranging from imaginative and witty to down-to-earth and simple, this dimension encompasses the breadth of an individual's interests.

- Conscientiousness: Spanning from well-organized and responsible to disorganized and undependable, this dimension reflects self-discipline and precision.

- Extraversion: Encompassing energetic, sociable, and talkative qualities on one end and reserved, cautious, and sober traits on the other.

- Agreeableness: Ranging from good-natured and cooperative to irritable and uncooperative, this dimension measures an individual's disposition towards others.

- Emotional Stability (Neuroticism): Spanning from poised and calm to nervous and high-strung, this dimension captures emotional tendencies.

- The present study seeks to investigate whether significant relationships exist between these personality traits and consumers' impulsive buying behavior, as well as whether gender plays a role in influencing impulsive buying behavior. By examining these relationships, the research aims to contribute to the understanding of consumer behavior and the factors that drive impulsive buying tendencies.

7. HYPOTHESES

The following hypotheses are proposed for this study :

H1: There is a significant relationship between personality traits and consumer impulsive buying behavior. It is expected that certain personality traits, such as Neuroticism and Extraversion, will be positively correlated with impulsive buying behavior among consumers.

H2: There is a significant difference between gender and consumer impulsive buying behavior. It is hypothesized that there will be variations in impulsive buying tendencies between male and female consumers, with one gender exhibiting a higher inclination towards impulsive buying compared to the other.

8.DATA AND METHODOLOGY

This study aims to investigate the impact of personality traits on impulsive buying behavior among consumers in the state of Kerala, aged 18 and above. The data was collected using a convenient sampling method, and a total of 100 consumers meeting the age criteria participated in the study. A well-structured questionnaire was utilized to gather the data, and the questionnaire was administered through Google Forms to the eligible respondents.

The present study adopts a Descriptive Research design, with the researcher utilizing a Correlational Research Design and the student's t-test for data analysis. To assess the personality traits, the Ten-Item Personality Inventory (TIPI) is employed.

The use of a convenient sampling method allowed for a practical approach in obtaining data from consumers in the specified age group, facilitating the investigation of the relationship between personality traits and impulsive buying behavior. The questionnaire

distributed via Google Forms provided an efficient means of data collection, ensuring ease of response and accessibility for the respondents.

By employing a Descriptive Research design, the study aims to describe the relationships and characteristics of personality traits and impulsive buying behavior among the respondents. The Correlational Research Design allows for the examination of associations between personality traits and impulsive buying tendencies. Additionally, the student's t-test will be employed to analyze any significant differences in impulsive buying behavior between different personality traits.

Overall, this methodological approach enables a comprehensive exploration of the impact of personality traits on impulsive buying behavior among consumers in Kerala, shedding light on potential patterns and associations between these variables.

9. SUMMARY OF FINDINGS

The study examined the impulsive buying behavior of respondents, with 70% being female and most falling within the 20-25 age group. Among the respondents, 62% were students, 30% were employed, and 8% were unemployed. The findings revealed various personality traits and their connection to impulsive buying behavior. For instance, 40% agreed to being extraverted and enthusiastic, while 45% disagreed with being critical and quarrelsome. Additionally, 47% strongly agreed to being dependable and self-disciplined.

The study highlighted that factors such as store environment, promotions, and situational triggers influenced impulsive buying behavior, particularly in individuals who experienced occasional anxiety or were easily upset. There was a moderate positive correlation between personality traits (neuroticism, extraversion, conscientiousness, openness to experience, and agreeableness) and consumer's impulsive buying behavior. The findings are consistent with previous research across different regions and consumer demographics. Notably, there was a significant difference in impulsive behavior between genders.

The study's insights have implications for marketers, helping them accurately segment the market and modify products or services to cater to individual differences and consumer psychology. It also presents opportunities for new marketing initiatives that align with consumers' needs and instant gratification tendencies.

Overall, the study emphasizes the dynamic nature of consumer buying behavior and the need for continuous research to understand its influence better. By incorporating additional relevant factors along with personality traits, researchers can gain a deeper understanding of the impulsive buying behavior of consumers.

In this study, correlation analysis was conducted to examine the relationship between the five personality traits and consumer's impulsive buying behavior. The results indicated moderate positive correlations between certain personality traits and impulsive buying behavior. Specifically, there was a moderate positive correlation ($r = 0.4015$) between Openness to new experiences and Consumer's Impulsive Buying Behaviour. Similarly, the personality trait Conscientiousness showed a moderate positive correlation ($r = 0.2628$) with Consumer's Impulsive Buying Behaviour. Likewise, there was a moderate positive correlation ($r = 0.2728$) between the personality trait Extraversion and Consumer's Impulsive Buying Behaviour. Moreover, the personality trait Agreeableness exhibited a moderate positive correlation ($r = 0.2677$) with Consumer's Impulsive Buying Behaviour. Overall, the analysis revealed a moderate positive relationship ($r = 0.5997$) between personality traits and consumer's impulsive buying behavior.

10. CONCLUSION

Consumer behavior is a dynamic and constantly evolving field of study, essential for adapting products and marketing strategies. Consumer preferences change with their surroundings and situations, and their decision-making process is complex, often driven by impulsive moments. Understanding the interplay between personality traits and impulsive buying behavior is valuable for marketers. This study examined the impact of personality traits on consumer impulsive buying behavior, revealing a moderate positive correlation between key personality dimensions (Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) and impulsive buying. The findings provide marketers with insights into consumer decision-making and the influence of store environment, promotions, and shopping experiences. Additionally, the study identified significant differences in impulsive buying behavior between genders, helping marketers better understand consumer psychology and make informed decisions in the market.

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GAMIFICATION IN HUMAN RESOURCE MANAGEMENT

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Abstract

Recently many companies are using gamification in Human Resource Management. The main areas in which gamification concepts are being used are Recruitment, Induction, Training and Development, Motivation and Employee Engagement. There are a lot of Gamification Apps developed by different companies for improving Customer and Employee engagement. This study covers the concept and scope of Gamification and the applications of Gamification in HRM with examples. The purpose of this work is to highlight the importance and the widespread development that gamification has had in the field of Human Resource Management.

Keywords- *Gamification, Employee engagement, Human Resource Management (HRM), Motivation, Game mechanics*

INTRODUCTION

Since people are the most important asset for an organization, people matter is among the top five concerns for business leaders. As the world economies continue to globalize, organizations continue to intensify their global investment. In the past few decades, talent has been the prime focus which reflects the importance of attracting, developing as well as retaining talented people. The term gamification has become increasingly popular in the HR world today, which is the use of game mechanics in non-game contexts to make things more interesting and user-friendly. Through gamification, people become more productive. As games have a phenomenal ability to keep people's attention for a long time, build relationships, win recognition and develop creativity, corporates use them to gain business advantage. Digitalization in Human Resources in the workplace has been proven as one of the major success factors in several worldwide popular companies. They incorporated game elements to make HR functions more effective and interesting so that they have s strong workforce throughout the life of the company.

2. LITERATURE REVIEW

A study done by Ms. Deotima Saha (2017), on the topic of Digitalizing human resources through gamification for employee engagement, examined the initiatives by the companies in adopting Gamification as a tool to engage employees. She collected information from a literature review of key reports on Gamification and employee engagement. There are also major reviews of a few organizations across sectors practicing Gamification initiatives as a part to engage the employees of the organization. This paper helps to understand the applications of Gamification in various organizations and its impact on employee engagement. Literature for that study was predominantly sourced from internet searches and the use of management journal databases. Researcher concludes that Gamification does not imply creating a game and it means making HR initiatives more fun and engaging. Gamification helps employees gain motivation towards their role and Key Responsibility Areas, and because of the positive feedback, they get pushed forwards and become more interested and stimulated to learn.

A study done by Camilla Perinot (2015) on "Gamification in the Field of Human Resource Management; Gamified Solutions for Recruitment" explains the fields in which gamification can be applied with examples. The study analysis how gamification changed the process of recruitment using social networks and games to attract skilled workers, and finally understanding if the new activities are useful and work better compared with the traditional ways. It compares cases of different companies using gamification for recruitment purposes. These case

studies are evidence of how gamification is changing human resource management because it can facilitate many routines and procedures that are long and wasteful.

Another study done by Levon Rivers (2016), on the topic ―The impact of gamification on employee engagement in advertising agencies in South Africa‖ used Quantitative research via Internet questionnaires to determine the level of employee engagement. The researcher selected some advertising agencies in South Africa and 211 responses were collected from their employees. Statistical tests were done on the collected data. The major finding of the study was employees from companies that use gamification were found to have significantly higher overall engagement levels. Their intellectual, affective, and social engagement levels were superior as well as they showed increased organizational citizenship behaviour levels and reduced intent to turnover.

Cognizant reports on the topic―Gamifying Business to Drive Employee Engagement and Performance says that what you really want to change is employee behaviour, which can be done using the gamification principles of ―stimulus-action-reward. Injecting gamification into the SMAC Stack (social, mobile, analytics and cloud technologies) will facilitate the behaviour changes necessary for a successful transition. They recommend that enterprises consider the following: Harness the potential to generate feedback by integrating relevant game mechanics into a process, integrate gamification with the enterprise architecture and avoid working in a silo. Getting the game design right by not being reluctant to learn through trial and error, creating a clear path for employees to master the process, and building gamification into the core business systems that they use on a daily basis to enable immediate feedback and change behaviour. They believe that the gamified process should be fresh and rewarding.

The study by Daniel McIntyre (2018) on the topic 'Can Gamification Increase Employee Engagement in a New Zealand Context?' proposed gamification as a possible solution for unsatisfactory employee engagement in New Zealand. The researcher collected data by conducting twelve in-depth qualitative interviews with employees who had some form of experience with gamification. Based on findings, gamification can bring both positive and negative impacts on employee engagement within New Zealand, unless it is handled with extreme commitment and devotion. The primary implication of the findings was the formulation of a ―Five-Step Guide to Installing Gamification in New Zealand Workplaces‖ , aiming to assist managers with workplace gamification. As the first step management should gain a positive employee perception and then they have to assess employees' psychological needs. In the next stage, management should clearly be communicating gamification to employees before implementation and should implement gamification in relation to psychological needs. Finally, assessment and adjustment gamification should be done if appropriate.

'Game on Engaging customers and employees through gamification' is an article in Business Horizons (2015) by Karen Robson, Kirk Plangger, Jan H. Kietzmann, Ian McCarthy, and Leyland Pitt. In this article, they discuss how gamification can aid customer and employee engagement, and explain the difference between four different types of customers and employees who act as players in gamified experiences. They are Slayers, Strivers, Socialites, and Scholars. They conclude that success in gamification is driven by the appropriate alignment of game elements with specific player types. A poor match between these results in gamification failures.

3. RESEARCH METHODOLOGY

To continue with our work on gamification and an endeavour to bring some clarity to the area of digitalization of HRM, this paper is based on a systematic review of the literature on Gamification which seeks to synthesize the current thinking and evidence. Emphasis is drawn on specifically on the scope of gamification and its use in the functions of Human Resources Management which have an impact on the performance of the employee. Literature for this study was predominantly sourced from internet searches and the use of management journal databases such as EBSCO, EMERALD and SCOPUS from the year 2005 to 2018.

4. RESULTS AND FINDINGS

Gamification is the application of game-design elements and game principles in non-game contexts. Gamification guru, Yu-kai Chou defines gamification as the craft of deriving all the fun and addicting elements found in games and applying them to real-world or productive activities.

4.1 Elements of Gamification

There are different elements for gamification, with which people can generate a gamified environment. Gamification is an integrated system composed of elements named mechanics, dynamics and aesthetics. This MDA framework is one of the main ingredients of gamification which game designers adopt to create a gamified experience, [Camilla Perinot 2015].

• Mechanics: they represent the decisions that designers make to specify the goals, the rules, the setting, the context, the types of interactions, and the boundaries of the situation to be gamified. Those are typically Points, Levels, Challenges, Badges, and Leader boards. These are the basic processes that drive the action forward and generate player engagement. Since points can be used to reward users across a number of dimensions, game designers include different categories of points to drive different behaviours within the same site or application such as experience points, skill points (score, rank) and influence points (rating and reputation). Levels are a system by which players are rewarded with an increasing value for accumulating points while gaming. As players progress to higher levels, several features or abilities are unlocked. Putting levels is considered as one of the highest components of motivation for gamers. Flat, Exponential and Wave functions are some of the leveling ramps that are used frequently.

Challenges, Trophies, Badges, and Achievements are four mechanics that work in a similar way in a similar way and they give people goals to accomplish and then reward them for achieving them. Challenges give people missions and an inner feeling that they're working toward something and it pushes them to achieve it. The general approach is to configure challenges based on actions that they are tracking as a part of their job or personal goals, so that they have an internal driving force, and reward these users for reaching milestones with trophies, badges, ribbons, etc. These give them a sense of accomplishment [JND Global 2011]. Another engagement tool which is widely used is the Leader board. The majority of successful games have implemented a high-score table which brings your name fame and light. They also indicate their performance against friends and against everybody else. In the context of gamification, leaderboards are used to track and display desired actions, which in turn motivate the user to perform better.

• Dynamics: They are the set of behaviours that a player might have during the gamified experience. Taking into account the mechanics chosen by the designers, these dynamics can vary considering the way the user thinks and behaves. These dynamics are extremely important as they are the most unpredictable element in games. This part is the hardest to manage while gaming because the designer cannot control it. Humans have needs and desires that are universal and they are based on generations, demographics, cultures, and genders. Game designers know how to address different needs within gaming environments and these precepts need to be applied broadly. Reward, Status, Achievement, Self-expression, Competition and Altruism are some of the most evident desires and motivations.

Human beings are motivated by receiving rewards as think it is something of value given for some kind of action. A reward, tangible or intangible, is presented after the occurrence of an action (i.e., behaviour) to reinforce that particular behaviour While earning points, obtaining virtual goods, levelling up, and completing achievements are the primary reward mechanisms in gamification, people often prioritize recognition and self-esteem over material rewards, thereby fulfilling their desires. Most humans have a need for social status, recognition, fame, prestige, attention, esteem and respect of others. People need to engage themselves in activities to gain these. One of the examples of levelling up is getting a gold or platinum credit card.

A lot of people are motivated and encouraged by a need to achieve, to accomplish something difficult through prolonged and repeated efforts and strong self-determination, to work towards goals, and to succeed in that. They tend to seek out challenges and set moderately difficult (but achievable) goals. Their most valuable reward is the recognition of their achievements by others. Many people want opportunities to express their autonomy and originality. They feel that they are unique with superior abilities compared to others. Giving virtual goods is a common way for players to create their own identities These can be earned through rewards, received as gifts, or bought directly with real currency. This is the purpose of putting the concept of avatar in gaming [Olga Belza, 2011]. Humans can also be motivated by fostering

competition. It is evident that when a competitive environment is established, higher levels of performance can be achieved. That is because we gain a certain amount of satisfaction when we compare our performance to that of other participants. All elements of game mechanics tap into this desire, even self-expression, but almost all games provide at least a simple top ten list and leaderboards to highlight competition.

• Aesthetics: Aesthetics describes the desirable emotional responses generated in the player, when he/she interacts with the game system. Aesthetics are closely connected to emotions with emotions. Therefore system of gamification is also defined as MDE (mechanics, dynamics and emotions) framework [Camilla Perinot,2015].

4.2 Scope of Gamification

It is possible to apply Gamification to almost every aspect of life. Some of the fields in which gamification is being applied are education, health, business, customer engagement and social media. The purpose of gamification in all these areas is the same. It creates a competitive mind and encourages the user to be more productive by making the activity more interesting with instant feedback, rewards and recognition.

Education: There are different case studies that see the application of gamification in the educational process for students. In fact, it may contribute to increasing the motivation of students to use tools for optimizing their personal learning environment (PLE) and knowledge about their own learning behaviour in the future. Cisco developed an arcade game called the Binary Game to teach the concept of binary numbers and how to think in binary. Cisco also offers a few other games related to computer networking. INNOV8 is a first-person 3D interactive simulation game created by IBM. This particular game enables players to practice business decisions by running an imaginary company with the help of simulation. This game is used in many schools to make the participant well versed in business decision making. INNOV8 teaches the complex idea of business process management and skills such as business problem solving, and prioritization, by helping players make decisions that impact a fictitious company [Kim B,2015]. Biju's, learning app is a Personalized Learning App which offers highly adaptive, engaging and effective learning. Free Demo Classes are provided in this App to make learning more addictive. Biju's Learning App is the world's largest learning app for school students with 16 million registered students. At present, it is India's largest education company and the creator of India's largest K12 learning app.

• Healthcare: In this case, we are referring to a particular context in which health is the center of attention. Gamification is used to make people think about their health and to encourage them to do more workouts. Games mechanics like rewards, points, competition and challenges motivate people to do exercise since they compare it with others. Nike Fuel is an example for the same. It is a type of bracelet that can measure the movement people do during the whole day. It is a simple universal way to measure how much the user moves and provides insight, motivation and opportunities to become a better athlete. It helps people measure the calories burnt during the day for moving around and they become more aware of the importance of exercising [Camilla Perinot,2015].

In the field of medicine, we report the example of the Hospital for Sick Children of Toronto. This is a hospital that takes care of kids affected by cancer. The doctor's aim is to find the best therapies while minimizing the pain‖. To reach this information, doctors need to understand the feelings of each child, but it is not easy to communicate with children to know their level of pain. So, in collaboration with a communication agency, they made ―Pain Squad‖, ―an iPhone app, designed to collect daily information about children's pain level. The app involves kids in a game as police members that fight to defeat pain. In this way, doctors can collect data about their therapies [Camilla Perinot,2015].

Wii Fit Plus is a video game that combines fun and fitness into one product. It is designed to everyone, both young and old. It can change the way people exercise, balance, and even move. They can check their Body Mass Index (BMI) and see Wii Fit age and keep their daily progress. Wii Fit includes 40 different activities and exercises which include yoga, strength training, aerobics, and a variety of balance games. Wii Fit Plus has been released in 2008 with 22 million copies sold as of now. This new Wii Fit Plus package has every feature from Wii Fit along with new exercises and tools to personalize user 's exercise routine.

• Business: Within organizations, gamification is extensively applied. The units that draw upon the game

mechanisms to increase people's engagement and motivation are various. ―Gamification can help make the workplace more engaging and productive because it changes the rules of engagement and inspires employees to change behaviours as a result and it promotes employee satisfaction, innovation, skills development and changing behaviours. So gamification motivates employees who are committed to pursue organizational values and goals [Camilla Perinot,2015].

Within companies, gamification can be applied in different departments and in numerous activities. For example, it can be used in the marketing department to motivate people to work well and look for new ways of advertising; it can belong to the research and development area in order to encourage innovation; and we can also find it within the finance area and within the human resource management for different HR functions [Camilla Perinot,2015].

•   Customer Engagement: Gamification is a powerful tool for engaging customers. It helps to attract new customers by creating brand awareness and also to retain existing customers. It is highly important to engage its already substantial customer base to become brand advocates; Samsung launched a gamified social loyalty program called Samsung Nation and it has proved as an effective tool to maintain existing customers. When customers register a product on Samsung.com, they are automatically entered into a contest for a chance to win other Samsung products as prizes. Customers are also rewarded for reviewing products, participating in Question & Answer discussions with other customers and users, watching videos of products, and otherwise getting engaged in the Samsung community. Users are awarded with badges when they progress through various levels of achievement in this program. Samsung has witnessed a 66 per cent increase in site visitors, a 30 per cent increase in comments, and a 500 per cent increase in customer product reviews, since implementing Samsung Nation (Patten. B 2016).

There are several successful gamification examples like Zero Emission from Nissan used for its ecological model Nissan Leaf. Kobo Reading Life is an application that tries to gamify reading, Nike ID is an e-commerce gamified application allowing users to design their own shoes and the most popular designs gather points [Saha D, & Pandita D 2017]. The Starbucks app is a convenient way to pay in store or skip the waiting line and order ahead. Customers can collect Stars and start earning free drinks and food whenever they purchase something. Starbucks Corporation is an American coffee company and coffeehouse chain. Starbucks was established in Seattle, Washington in 1971.

•   Social Media: It is important for brands to ensure that their social media channels attract repeat traffic. Of course, the focus is on brands to make sure their followers have a good reason to come back. Gamification, if implemented well, can pan out to be a blockbuster strategy for brands to attract repeat traffic, boost interaction and garner crowdsourcing capabilities. These games are challenging, motivating and funny. But people want their friends to see them win, so they use social media to talk about their successes. With every winning follower, brands are winning big. Brands, in fact, build emotional connections with customers with the help of gamification to maintain long-term relationships. It is obviously a marketing strategy which engages their audience with fun and creates powerful brand advocates for their brands. Doritos brought a gamified promotion program named the Doritos Roulette Challenge asking consumers to try a bag of chips. It was a campaign to share experiences of eating spicy chips that received a lot of videos from its consumers and was a great success. It received more than 22,000 likes and 8,000 shares on Facebook.

Similarly, Facebook gamified one of its features called Facebook Editor 'through which users can suggest edits. With leader board, progress levels and badges, this tool enables Facebook to receive data suggestions and review suggestions from users, so that they can make some changes to make more user engagement. Users across the globe compete and receive badges, ultimately helping Facebook enrich data quality and accuracy. M&M's introduced a game as a part of its Pretzel marketing campaign. It was based on the eye-spy logic, where users on Facebook were given scattered M&M's in a large image and were asked to detect one small pretzel inside. Even though the design of the game was inexpensive, it quickly went viral and brought great results for the company in terms of customer engagement, shares, comments and willingness of people to buy the Pretzel brand.

5.   APPLICATIONS OF GAMIFICATION IN HUMAN RESOURCE MANAGEMENT

It should be understood at the outset that gamification is not about making games; it is about integrating game elements into existing processes. This

is trickier than it may at first seem, as it involves looking beyond badges and incentives and identifying the intrinsic motivations they wish to focus on. This involves understanding employees 'behavioural patterns in relation to the processes they work on and creating a socially collaborative work environment. By identifying these patterns through behavioural analytics, companies can focus on gaps they need to fill, which in turn will guide the game elements that need to be introduced [Dr Naval Lawanda, Rashmita Mohile].

Gamification helps in channelizing and reorienting employee goals with business-oriented goals. In order to develop and implement gamification strategies effectively, it is critical that all Human Resource professionals should understand the concept and its difference from Game Based learning thoroughly [Saha D,& Pandita, D,2017]. Otherwise, they cannot achieve the organizational goals they were aspiring to through gamification. Through gamification, employees are encouraged to do the same things in a more fascinating, competitive and fun way and be rewarded for the same. Besides better retention, this also leads to better engagement in improvement in overall productivity. Gamification is also used in different functions like to attract, hire, select, induct, train and develop employees.

• Recruitment: Recruitment refers to any practice or activity carried on by the organization to identify and attract potential employees, so it comprehends all the techniques to make the organization suitable and appealing for skilled workers. Even if selection in HR is strictly different because it is a process through which the organization decides among numerous candidates to look for the more capable employees, we refer to recruitment in HR as the whole activity of attracting and selecting the right people for the right place.

Marriott International developed a recruiting game My Marriott Hotel, to attract Millennial to join their hotel. In this game, the participants can experience a virtual hotel restaurant kitchen and they have to manage the various hotel operations like buying equipment and ingredients on a budget, hiring and training new employees and finally serving guests. When the game [progresses, participants are awarded points for happy customers and when their operation turns a profit. However, they lose points for poor service [Raghavendran S, & Kumar H,2015].

Google Code Jam is a software-writing competition conducted by Google every year. Coders and programmers from over 100 countries participate in this competition each time to test their skills and to become winners. The participants have to solve algorithmic puzzles in languages like JavaScript, LOLCODE, C+ +, INTERCAL and Whitespace. The prize money involved is up to $50,000. Though it's fun and challenging, it helps individuals develop their programming and coding skills. Besides, it is a strategy used by Google to attract and select the right talent for their challenging job [Raghavendran S ,& Kumar H,2015]. L 'Oreal Group is one of the most innovative companies, helping applicants challenge themselves. L 'Oreal has been a long-time leader in recruitment. Since 1993, the Group has produced a dynamic portfolio of international business games that encourage young people to realize their potential, develop their professional skills and discover career opportunities by having fun.

They developed the game Reveal by L'Oreal, which is —a unique experience for college students of all academic disciplines preparing for the working world. This game is presented as a serious game available on the internet. It lets people —experience the story of a brand-new product launch process, from the birth of an idea until the launch on the market ‖ . In this sense, we can say that once you register, it is presented as a sort of video game in which people play for enjoyment, but understand the multiple aspects of a new product launch. In fact, L'Oreal was elected the most attractive employer by 130,000 students from the world's best universities. BNP Paribas provided an online business game named Ace Manager which allows players such as students to play the role of a banker. It helps them to experience retail banking, investment solutions and corporate and investment banking, an adventure game aimed to hire the best talents for the organization [Camilla Perinot, 2015].

• Induction and Orientation: It is in the onboarding process in which the new employees are integrated into their organizations, are familiarized with their jobs in terms of clients or customers, products or services etc. Gamification can be used during this process so that they will feel complete and in competition. This promotes a sense of accomplishment within the employees and enhances their self-esteem. As the use of unnecessary competition to push employees to perform better is not a good strategy, through gamification, the transfer of knowledge pertaining to job responsibilities can be made more effective and easier.

Gamification can start right at the onboarding stage when new hires need to complete what may seem like mundane exercises such as filling out forms and learning about the company's policies and values. From there, gamification can become an integral part of employees 'time at the company, enriching their experience at each stage of the employee lifecycle. Research has shown that employees trained on simulation games learn better and develop more skills, as these games engage trainees 'affective and cognitive processes (See Figure 1) [Traci Sitzman,2010].
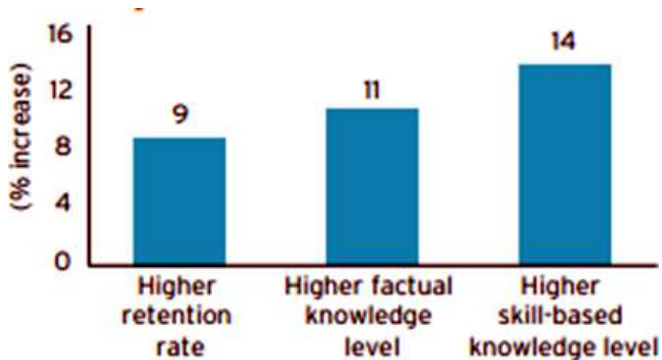

Fig. 1O utcome of Training Using Simulation Games

Training is a critical process for HR as it helps to provide the right information to the newly hired employees and ensure maximum productivity as swiftly as possible. It enables employees to have first positive experiences of their company, workplace, colleagues and team members. Aberdeen Research, in its February 2013 report, stated that onboarding with gamification produced significant improvements in turnover and engagement levels. Deloitte LLP 's onboarding game focuses on teamwork and collaboration. Here, groups of new hires from different backgrounds and experiences are formed and are made to learn about the compliance, ethics and privacy of the company.

To maintain the consistent high quality standard of food and service, Domino's created the Pizza Maker course, a training strategy that uses simulations and gamification to engage, assess and reward employees during the induction stage. By including elements that encouraged employees to try to improve past scores, the games helped new employees master the menu sooner and make more accurate pizzas faster thereby decreasing onboarding time [Patten, B.2016]. 'Make My Trip' has designed an engaging training program where the new hire plays a game with a pair of headsets given

by the company. Through this, the company aims to acquaint them with the culture/values of the organization in an effective manner. HCL has developed an interesting game with the help of a monopoly game which the potential candidate has to play and based on the behaviour of the candidate in the game, the company can figure out the skills, attributes and their intention to join. This is one of the path-breaking uses of gamification in this area to reduce the drop rates of employees at the time of joining [Saha D, & Pandita D 2017].

• Training and Development: Gamification is an effective tool for training and development. Cognizant reports show that their experience with gamification has been rewarding. Using game elements such as stories, challenges and freedom to fail, over 2,000 associates were certified on Cognizant's corporate social media policy within 24 hours of the course being launched. Before that, it usually took more than a week. Another famous company named WalMart designed a Safety Education Program to train their employees on safety and compliance procedures.

Another major example of gamification in training and development is a gamified online training program called Deloitte Leadership Academy developed by Deloitte, which is a large consulting company. Gamifying this training program resulted in a 37 per cent increase in the number of users returning to the site each week. It also increased the amount of time people spent on the program and the number of programs completed. Deloitte Leadership Academy offers a sizeable amount of coursework for a wide variety of topics in consulting. The aim is to make training programs more accessible for senior executive staff. With the help of Badgeville Game Mechanics, Deloitte introduces gamified elements like leaderboards, status symbols and badges to make training sessions more interesting. This measures how many executives participate and complete the course, gives instant feedback on their progress and guides them towards completion of the course. Since senior executives were not engaged or intrinsically motivated to attend training, this online platform encouraged them to start and finish the training programs in less time. After consultation with Badgeville and improvements in the framework, it has led to 50% faster completion of the course, 47% higher rate of daily return by employees and 36% greater retention (weekly).

Cisco invested in a global social media training

program to foster an atmosphere of healthy competition and collaboration. It was a program consisting of 46 courses with no clear starting point. In order to make it attractive, Cisco gamified this program by introducing three levels of certification--- Specialist, Strategist and Master. It included four sub-certification levels for HR, external communications, sales, and internal partner teams. Several team challenges were included in this. As of this time last year, employees took over 13,000 courses and over 650 Cisco employees had been certified [Patten B,2016].

Since games are often more effective for learning than traditional training approaches, McDonald's trained their staff on the new cash register and ordering system by turning the entire environment into a game with scores, challenges, timers, and feedback. In this gamified experience, the staff was allowed to make mistakes and learn from them. This technique was highly successful to increase revenue and it was evident in financial reports. Similarly, WalMart designed a Safety Education Program to train their employees on safety and compliance procedures. This was a game-based approach where workers could learn at their own pace and choose levels. The program was short, concise and points oriented, resulting in dramatic results. After 6 months, WalMart reported lost time cuts by over 50% and below industry average incidents [Saha D,& Pandita D,2017].

• Employee Engagement: Employee engagement is the extent to which employees feel passionate about their jobs, are committed to the organization, and put discretionary effort into their work. Employee engagement is quite different compared to employee satisfaction. A Gallup study revealed that millennials are the generation that is least engaged as they don't find opportunities to display their best and to contribute their ideas and suggestions. HR can make use of the synergies of employee engagement and gamification by devising gamification strategies and solutions by keeping employee engagement at its core. Designing an effective gamification platform can be done through feedback and surveys that reflect the interests, voices and opinions of the employees. HR must ensure that the already existing disengaged employees in the system are converted into engaged employees and that the new employees who enter the system, are fully engaged with the help of gamification strategies.

A survey by Gallup found that over 70% of American workers are either not engaged or are actively disengaged in their work. The report showed that disengaged employees cost the U.S. economy $450 billion to $550 billion annually. With its ability to motivate employees and measure performance, gamification can help organizations put employees at the forefront of change by inspiring them to embrace desired behavioural changes. Gartner, for instance, predicts that over 40% of the Global 1000 will use gamification by 2015 as the primary mechanism to achieve employee engagement for the transformation of business operations their employees. Elsewhere, the growth of smartphones has meant that more people beyond millennials have been introduced to gaming. Take Angry Birds – launched in 2009, it had over 263 million active users by December 2012. Add to this the similarities that games share with real-life work scenarios, just as games have levels, scores and points, a typical job will have targets, incentives and promotions, and gamification begins to seem inevitable [Dr. Naval Lawande, Rashmita Mohile,2017. McDonald's trained its staff on the new cash register and ordering system by turning the entire environment into a game with scores, challenges, timers, and feedback.

Deloitte 's US India Offices' Maverick is a quintessential example of employee engagement through gamification. With the help of Maverick, Deloitte has hit the 'sweet spot' [Walz. S, Deterding.S, 2015]. Being launched in 2009, the program ensured engagement, experimentation, discovery of talent and creativity by the employees in the organization. Through this gamified program, Deloitte facilitated innovation in every aspect. As a part of this, the employees were divided into teams and each team was assigned a business case, for which they had to submit a written solution which they find as effective. The solutions were to be assessed and scrutinized by a panel of judges. This contest thoroughly tested the participant's problem-solving skills and, logical and critical thinking skills. Once administered, it gathered a huge support and critical acclaim and was applauded by both leaders and professionals [Walz S, Deterding. S, 2015].

It was implemented again in 2010 and 2012. In 2012, Deloitte introduced the Maverick program in some of the universities and management institutions across India. It has been taking place every year as 'Campus Maverick', since then, because of its huge impact. This program was phenomenal in case of creating a positive

image of the brand in the minds of potential candidates by making them believe that the organization is fully invested in their employees [Walz S, Deterding.S, 2015].

Bluewolf, an IBM company, started a program called Going Social. Bluewolf is basically a sales force consulting firm. They have gamified their knowledge sharing and encouraged employees to go social. They created 'Pack Profiles' of employees across the company website which are social and focused on knowledge. Each profile is managed by the employee on their own. Bluewolf has incentivized its staff to go social. Employees (from the sales force) earn points for external and internal collaboration. For instance, they earn points for publishing a post on website. They have set up a 'one stop shop' which has all the resources like video tutorials, presentations, and pdfs to help the employees to go 'social'. This gamified solution has gone a long way in empowering and engaging the employees at Bluewolf.

Microsoft built a 'Language Quality' to ensure that language translations were accurate and made sense. They created this game using its own Silverlight application. The game allowed Microsoft staff around the world to view screens and check for language accuracy. Microsoft even published some intentionally poor translations to ensure that its employees were engaged and paying attention. The game attracted 4,500 users who reviewed a total of 500,000 screens and made translation corrections based on their native tongues [Patten, B,2016].

• Performance Management: Performance management is a process by which managers and employees work together to plan, monitor and review an employee's work objectives and overall contribution to the organization. Persistent Systems goes beyond transactions and monetary rewards to create personalized experiences with consumers and employees. They do so with the help of "eMee" which is their gamification platform to make sure that the workplace can be fun and engaging. They tried to convert monotonous and routine tasks into something that employees would enjoy doing and achieved greater performance from employees. eMee developed a professional and social networking platform for their employees to make them more social. They realized that their organization lacked a structure which enabled the employees to connect and reach out to each other.

To begin with, with the help of eMee, the managers switched over to continuous performance assessments throughout the year rather than end of the year appraisals and 360-degree feedback. The conversations which the employer and the employee have become more transparent, further reinforcing the employees' faith and beliefs in the organization. To ensure more engagement, they went a step ahead and introduced the concept of 'virtual gifts' which employees can give to each other. In fact, Employees are provided with online profiles where they can flaunt their technical skills and achievements to other employees. To provide extrinsic motivation and foster healthy competition managers even give virtual certificates, points and badges to the employees. According to a companywide survey done by Persistent, the use of eMee led to decreased employee turnover rate and a huge increase in job satisfaction among employees. Persistent Systems provide customized eMee solutions to organizations as well considering their organization structure [Robson Karen, Plangger, Kirk,2016].

Australian start-up Wooboard has developed an interesting idea where employees can thank each other for work they have done by sending a ―Woo‖. There was an option to tag it with a category which is maintained by management which reflects the core values and activities the management wants to encourage. The purpose of this standalone system was to enable peer recognition. While performance management without gamification is about measuring performance, gamified performance management (GPM) is more about coaching experience. A CEB research found that 6% of Fortune 500 companies have decided to stop using rankings, which used to be the standard for HRM. Accenture has announced that it is getting rid of annual performance rankings and reviews [Saha D, & Pandita D,2017].

6.   CONCLUSION

Gamification does not imply creating a game. It means making HR initiatives more fun and engaging employees. Gamification helps employees gain motivation towards their role and Key Result Areas, and because of the positive feedback, they get pushed forwards and become more interested and stimulated to learn. The global gamification market has been growing and is estimated to grow to USD 11.10 Billion by 2020, at a Compound annual growth rate of 46.3%. So, it is a growing industry. Companies can use gamification in different areas, mainly in Human Resource Management, to engage their employees better. The

impact of gamification in different HR activities is exceptional and it has already proven effective. There are several metrics to analyze user engagement such as page views per visitor, time spent on site, total time per user, frequency of visit, participation and conversions. Gamification emerges as a very important technique for user engagement in all fields. The scope of gamification is far beyond the limit of this research and hence further researches are encouraged in this field.

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WORKPLACE STRESS ON EMPLOYEE WELL-BEING IN THE DIGITAL AGE- AN EMPIRICAL INVESTIGATION

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Abstract

This study aims to examine the impact of employee stress on employee well-being in the contemporary Banking Sector. The modern banking environment is characterized by increasing demands, technological advancements, and a rapidly changing work culture. Consequently, employees face various stressors that can significantly affect their overall well-being. This research seeks to delve into the intricate relationship between employee stress and well-being, taking into account the unique challenges posed by the digital age. To accomplish this objective, a quantitative approach was used which involved collecting data from a diverse sample of employees across different banks, using validated measures to assess levels of stress and well-being. The study's findings shed light on the extent to which employee stress impacts their well-being, considering factors such as workloads, job demands, organizational support, and the use of digital technologies. The research aims to contribute to the growing body of knowledge on employee well-being and provide practical implications for organizations to design effective interventions and support mechanisms to mitigate the negative effects of stress on their employees.

By examining the effect of employee stress on well-being in the context of the digital age, this study acknowledges the evolving nature of work and the unique challenges faced by employees. It seeks to provide valuable insights that can inform organizations' strategies to enhance employee well-being, promote a healthy work environment, and foster sustainable performance and productivity in the contemporary workplace.

Key Words: *Workplace Stress, Employee Well- Being, Digital Age, Technology, Banking Sector*

INTRODUCTION

In today's fast-paced and highly competitive business world, banking is one of the most dynamic and demanding industries. With the advent of technological advancements, globalization, and constantly evolving regulatory frameworks, employees in the banking sector often find themselves under significant pressure to meet targets, handle complex transactions, and adapt to rapidly changing market conditions. As a result, employee stress has become a critical concern that can profoundly impact their overall well-being.

Employee well-being is a multidimensional construct encompassing physical, mental, and emotional health, job satisfaction, work-life balance, and overall life satisfaction. When employees experience high stress levels without adequate support systems, their well-being can be severely compromised. This not only affects the individuals themselves but also has significant implications for organizational performance, productivity, and employee retention.

The banking sector, in particular, operates in an environment characterized by long working hours, stringent performance targets, and high job demands. Furthermore, the incorporation of digital technologies, while enhancing efficiency and convenience, has also introduced new stressors into the work environment. The constant connectivity, information overload, and the blurring of work and personal boundaries have amplified the potential for employee stress to escalate.

Understanding the relationship between employee stress and well-being is crucial for organizations in the banking sector to design effective strategies and interventions that promote a healthier work environment and support the holistic development of their employees. By examining the factors contributing to stress and their impact on employee well-being, organizations can

proactively identify areas for improvement and implement targeted interventions that alleviate stress and foster employee resilience.

Despite the extensive research on employee stress and well-being in various industries, there remains a gap in the literature when it comes to exploring this relationship specifically within the banking sector. This study aims to bridge this gap by investigating the effects of employee stress on well-being in the context of the banking sector. By focusing on this industry, we can gain insights into the unique stressors faced by banking professionals and the specific challenges that impact their well-being.

Through a comprehensive examination of employee stress factors, such as heavy workloads, customer demands, tight deadlines, role ambiguity, and the use of digital technologies, this study seeks to provide valuable insights into the mechanisms through which stress influences employee well-being. The findings of this study will not only contribute to the existing body of knowledge on employee stress and well-being but will also provide practical implications for the banking sector. Organizations can utilize these insights to implement evidence-based strategies to reduce employee stress levels, enhance well-being, and cultivate a supportive work environment that promotes the overall health and satisfaction of their employees. Ultimately, this research aims to contribute to the long-term success and sustainability of the banking sector by prioritizing employee well-being in the face of mounting challenges and demands.

2. REVIEW OF LITERATURE

Stress arises when employees face challenges in meeting deadlines, cope with an overwhelming workload within a limited time, and encounter various other factors. The well-being of employees is interconnected with their physical and mental health. It is the employer's responsibility to create a work environment that promotes employee well-being. Physiological well-being leads to mental well-being, and together they help individuals achieve work-life balance. If employees are satisfied and happy with the organization, they are committed to it and can easily balance their work-life.

The most widely studied workplace stressors are lack of organizational support, work overload, stressors, non-standard work hours (including long work hours), etc. (Rowe, 2011; Zohar, 1999; Ostraw, 2011;

Shagvaliyeva & Yazdanifard, 2014). According to past research findings, increasingly heightened expectations, lack of appropriate breaks, and unrealistic deadlines cause work-related stress, and it was found that different kinds of people react to stress differently (Shiamzu & Kosugi, 2003). Gender also plays a very important role in dealing with stressors like work overload. Females face severe stress when there is a conflict between organization and family life, whereas males are stressed about their roles in the organization (Vagg, Spielberger, & Wasala, 2002).

Employees who experience higher levels of self-reported "overwork" report a higher scale of stress, symptoms of depression, and poor health and self-care. Long working hours not only affect personal life but also have a negative impact on employees' health. They evidently increase the risks of accidents, affect work productivity, and have long-term health effects on employees, thereby increasing costs for the organization. Ostraw (2011) reported that working for more than 11 hours can result in heart ailments, thus negatively affecting employee health and productivity levels. Many organizations have reduced their working hours and implemented flexible work systems to retain their talented employees. Research findings by Shagvaliyeva & Yazdanifard (2014) state that employee well-being, both mental and physical, affect employee productivity and performance. Mental well-being is an important sign of a healthy life. If an employee is mentally ill, it will result in poor behavior both at work and in the personal domain. Stress generated from work or other sources causes anxiety and depression, resulting in poor performance of employees. Long-term and excessive stress can be a serious threat to the well-being of an employee. When stress levels rise, it leads to a drop in employee performance, such as loss of time, workplace safety concerns, accidents, and increased costs for their organizations. Stress caused by different and difficult work schedules interferes with employees' family lives. Employees don't get enough time to spend with their families, and the stress caused by challenging work schedules also makes them physically and psychologically exhausted. The relationship between the number of hours worked and burnout depends on the extent to which the work schedule meets the needs of the employers, his / her partner, and their children.

Empirical evidence has suggested that workplace stress negatively affects the physical health of

employees. Excessive stress results in burnout, eventually leading to individual and organizational losses. Job stressors have not only a negative impact on physical health but also on psychological health and family life, causing individuals to deviate from normal functioning. Excessive stress can lead to sudden cardiac death, tuberculosis, diabetes, psychological diseases like anxiety and depression, and behavioral outcomes such as poor academic and work performance (Mishra and Kumari, 2009).

According to researchers, organizational commitment moderates the relationship between stress and health. It is not only related to physical outcomes but also acts as a moderator for the stressor-health relationship (Ahmed Shaikh, 2013). Commitment towards the organization enables employees to find direction and meaning in their work. It also provides employees with a feeling of belonging and stability (Memoona Akram, 2013). Some researchers argue that employees' perceptions of their employer's commitment to them act as a buffer when they face stressful working conditions.

The reality of working life is that employees tend to balance work life and personal life, which can have a positive or negative spillover effect on their work and well-being. A research study conducted by Bell, Rajendran & Theiler (2012) investigated the relationship between perceived job stress, job pressure, job threat, and the well-being of employees. It was found that perceived job stress was strongly and negatively related to work-life balance, thus having a negative relationship with employee well-being but a weaker positive relationship with employee ill-being.

Based on the critical review of related literature and in line with the purpose of the study, the following hypothesis will be tested:

H1: Workplace stress has an impact on employee well-being in the banking sector.

3. STATEMENT OF THE PROBLEM

The banking sector is known for its high-pressure work environment, characterized by demanding targets, complex transactions, and ever-changing market conditions. In recent years, the incorporation of digital technologies has further intensified the stress levels experienced by employees in this industry. While employee stress is a recognized issue, the impact of this stress on employee well-being in the banking sector

remains a significant concern.

The problem at hand is the lack of comprehensive understanding regarding the effect of employee stress on employee well-being within the banking sector. Although previous research has explored the relationship between stress and well-being in various industries, the unique context of the banking sector necessitates a specific investigation. Employees in this sector face distinct stressors, including long working hours, customer demands, tight deadlines, role ambiguity, and the constant integration of digital technologies into their work processes.

Given the critical role of employee well-being in organizational performance and productivity, it is crucial to address this issue effectively. Understanding how employee stress impacts their overall well-being in the banking sector can provide valuable insights for organizations to develop targeted interventions and support mechanisms that promote a healthier work environment and enhance employee satisfaction, resilience, and performance.

Furthermore, the banking sector operates in a highly competitive landscape, where talent retention and employee engagement are vital for long-term success. High levels of stress without appropriate coping strategies and support systems can lead to burnout, decreased job satisfaction, increased absenteeism, and a higher turnover rate. These outcomes not only have detrimental effects on individual employees but also pose significant challenges for organizational stability and growth.

Therefore, this study aims to address the following research questions:

• How does employee stress manifest in the banking sector, considering factors such as heavy workloads, customer demands, tight deadlines, role ambiguity, and the use of digital technologies?

• What is the impact of employee stress on employee well-being in the banking sector, encompassing physical, mental, and emotional health, job satisfaction, work-life balance, and overall life satisfaction?

• What are the potential organizational and individual factors that mediate or moderate the relationship between employee stress and well-being in the banking sector?

• How can organizations in the banking sector design effective strategies and interventions to mitigate the

negative effects of stress on employee well-being and promote a healthier work environment?

Addressing these research questions will contribute to a comprehensive understanding of the effect of employee stress on employee well-being in the banking sector. The findings will provide valuable insights for organizations to develop evidence-based interventions and support mechanisms that prioritize employee well-being, foster a positive work culture, and ultimately enhance the long-term success and sustainability of the banking industry.

4. OBJECTIVES OF THE STUDY

• To assess the levels of stress experienced in the banking sector, considering factors such as heavy workloads, customer demands, tight deadlines, role ambiguity, and the use of digital technologies.

• To examine the impact of stress on various dimensions of employee well-being within the banking sector, including physical health, mental well-being, and emotional well-being

• To analyze the role of gender in employee stress level and wellbeing

• To provide practical recommendations and evidence-based interventions for organizations in the banking sector to mitigate the negative effects of employee stress on employee well-being and promote a healthier work environment.

5. DATA AND METHODOLOGY OF THE STUDY

A questionnaire was distributed among 100 respondents in private sector banks in Kerala. The primary data were collected cross-sectionally through online and physical distribution of the questionnaire. Convenience sampling method was used in the study. The questionnaire was developed using items from pre-validated measures, such as the work stress scale used by the American Institute of Stress (2011) and the Stress in Workplace Scale by the American Psychological Association (2011). The employee well-being scale and workplace stress scale were taken from the University and College Union (2013). The questionnaire included socio-demographic questions, such as the gender of the respondents, average hours worked per week, mode of employment, and years working at the position. The remaining items were specific to the variables of research interest.

6. RESULT OF ANALYSIS

The present study aimed to analyze the impact of stress on banking employees in the current world. Descriptive statistics, including percentage analysis, were conducted to examine the demographic profile. Among the respondents, 46% were male, and 54% were female, with the majority falling in the age group of 23-25 (48%). Additionally, most of the respondents had post-graduation as their qualification. Furthermore, a total of 53 respondents (36%) reported working for more than 51 hours per week, indicating that many of them may experience stress due to long work hours. Considering the industry, they work in, employees are often required to work extra hours.

Table 1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.525ª	.276	.266	.968

a. Predictors: (Constant), WS

Table 2 ANOVAª

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.116	1	26.116	27.844	.000ᵇ
	Residual	68.471	73	.938		
	Total	94.587	74			

a. Dependent Variable: EW

b. Predictors: (Constant), WS

Regression analysis was conducted to examine the impact of work stress on employee well-being in banking sector employees. Table 1 presents the results, indicating that the coefficient of determination (r^2) is 0.276, demonstrating the explanatory power of the variable. This means that 27.6% of the variation in bankers' well-being is influenced by the variation in stress levels. This finding is further supported by the adjusted r^2 value, which is 0.266. Table 2, which shows the ANOVA results, reveals that the F-statistic has a recorded value of 27.844 with a probability of 0.000. These findings indicate that the independent variable (stress level) has a significant effect on the dependent variable (employee well-being), suggesting that the stress levels of employees in banks can lead to variations in employee well-being.

7. TEST OF HYPOTHESIS

H1: Employee stress significant effect on employee well-being of bankers.

Table 3 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	4.371	.320		13.644	.000	3.732	5.009
WS	-.547	.104	-.525	-5.277	.000	-.754	-.341

a. Dependent Variable: EW

The hypothesis formulated in the study were empirically tested using t-statistics value and probability value in co-efficient of linear regression analysis. The result is presented in table 3. The table specifies that work stress has a T-statistics value of -5.277 with a significance of 0.000 which indicates there is a negative impact between work stress and employee wellbeing. The standardized coefficient value signifies that any change in workplace stress can cause a -0.525 change in employee well-being. Thus, the alternate hypothesis can be accepted and concluded that work stress has a significant negative effect on employee well-being.

Based on the results of the study, the researchers conclude that there is an impact between work place stress and employee well-being but the impact is weak. An increase in workplace stress will reduce well-being . Bell, Rajendran & Theiler (2012) in their research study among Australian academicians have concluded that when employees are faced with immediate perceived stress such as shorter deadlines, it affects their personal lives and anxiety levels at a short-term level and not in the long term thereby not affecting their well –being in the long term. Their research findings showed negative impact of workplace stress on employee well-being. Workplace stress is not the only predictor of employee wellbeing; other factors such as changes in the organization, job insecurity, non-work-related stress etc. may also affect employee well-being. The findings of this research study may not be conclusive but definitely, the constructs of the study are of importance from personnel aspects.

8. IMPLICATIONS

The findings of this study on the effect of employee stress on employee well-being in the banking sector have several important implications for organizations, employees, and researchers.

This study contributes to the existing body of knowledge by examining the specific context of the banking sector. It adds insights into the unique stressors faced by bank employees and the mechanisms through which stress affects their well-being. Organizations in the banking sector need to recognize the impact of employee stress on well-being and take proactive measures to create a supportive work environment. This includes addressing excessive workloads, providing resources for stress management, and promoting work-life balance. Effective leadership and management practices that prioritize employee well-being can mitigate stress levels. Organizations should invest in training programs that enhance leadership skills and promote supportive management styles. Banks should revisit their policies and procedures to ensure they do not contribute to employee stress. For example, considering flexible work arrangements, promoting clear job roles and responsibilities, and encouraging open communication channels can greatly enhance productivity and foster a positive work environment.

Employees need to be aware of their stress levels and their impact on their well-being. They should take responsibility for managing their stress and seek support when needed, such as utilizing employee assistance programs or accessing mental health resources. Developing and implementing effective coping strategies can help employees mitigate the negative effects of stress. This may include practicing relaxation techniques, maintaining a healthy work-life balance, engaging in physical exercise, and seeking social support.

9. CONCLUSION

In conclusion, this study aimed to investigate the effect of employee stress on employee well-being in the banking sector. The findings highlight the significant impact of stress on various dimensions of employee well-being, including physical health, mental well-being, emotional well-being, job satisfaction, work-life balance, and overall life satisfaction. The study reveals that the banking sector is characterized by high-pressure work environments, heavy workloads, tight deadlines, and the integration of digital technologies, all of which contribute to elevated stress levels among employees. The negative consequences of stress on employee well-being are well-documented, including decreased job

satisfaction, burnout, compromised work-life balance, and potential physical health issues.

The study emphasized the importance of considering both organizational and individual factors in understanding the relationship between employee stress and well-being. Organizational factors, such as leadership styles, job autonomy, and organizational support, were identified as influential in mediating or moderating the impact of stress on employee well-being. Individual factors, including coping mechanisms, resilience, and social support, also played a significant role in mitigating the negative effects of stress.

Future research should continue to explore the topic of employee stress and well-being in the banking sector, considering emerging trends and challenges. Longitudinal studies can provide insights into the long-term effects of stress on employee well-being, while comparative analyses across industries can enhance understanding of sector-specific stressors and coping mechanisms. Ultimately, addressing employee stress and promoting well-being in the banking sector not only benefits individual employees but also contributes to enhanced organizational performance, employee satisfaction, and long-term sustainability. By prioritizing employee well-being, organizations can create a healthier work environment that supports the overall success and growth of the banking industry.

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A CASE STUDY ON SOCIAL ENTREPRENEURSHIP FOR SKILL DEVELOPMENT IN INDIA

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Abstract

Social Entrepreneurship has become an emerging model for organizations planning to do good for the community. The case study method is an effective research tool for understanding factors influencing the efficiency and effectiveness of social enterprises. In this case, three social enterprises are compared namely RUDSETI, SyndRSETI and Kanthari. In this study, researchers have adopted tools like participant observation and in-depth interviews. The vision, Mission and functioning of the organization are described in a storytelling format. All these institutes are unique forms of enterprises for skill development. Policymakers should take action to preserve and support these institutes for social development. Future researchers should further explore the case study mode of research to identify unique enterprises and their values for model building.

Keywords: Social Entrepreneurship, Skill Development, Efficiency, Effectiveness, In Depth Interviews, Model Building

INTRODUCTION

Researchers have defined social entrepreneurship in different ways. From a broad perspective, social entrepreneurship refers to innovative activity with a social objective in either the for-profit sector or in the nonprofit sector, or across sectors. The difference between the two is that the former emphasises generic social value creation, which is not restricted by sector boundaries and has no specific commercial character. At the same time, the latter is only applicable to the nonprofit sector and is framed more specifically in business and revenue-generation terms.

Despite the differences, the two perspectives share some common characteristics, the underlying drive for social entrepreneurship is to create social values, rather than personal and shareholder wealth. The central driver for social entrepreneurship is the social problem to be addressed, and the particular organizational form a social enterprise takes should be based on the ability to mobilize the resources.

Social entrepreneurship is defined in comparison with commercial entrepreneurship by several authors. Dees (1998) compared the social enterprise spectrum with the continuum between philanthropic and commercial institutions. Also, scholars have tried to apply the commercial entrepreneurship model to analyze social entrepreneurship, based on which social entrepreneurship is explained.

Social Entrepreneurship has become a buzzword all across the world these days. While the practice of social entrepreneurship existed for a long time but the term got attention recently. Interest has come from several quarters - from policymakers who recognize the capacity of social ventures to facilitate local and regional economic development; and from practitioners in the nonprofit sector, who recognize the capacity of social ventures to strengthen the financial sustainability and innovativeness of existing organizations. Interest has also come from researchers, attracted to study social ventures not only for their potential to generate social and environmental as well as economic outcomes but also because they represent an interesting organizational form– a hybrid of conventional for-profit and non-profit forms. This growing interest in social ventures has prompted calls for a better understanding of how such ventures are actually formed. Yet there has been very little research into the process of new social venture formation to date. The dearth of empirical research makes it difficult to identify whether prevailing 'stage-based' models of social venture formation constitute an accurate explanation.

There has been growing interest, among

researchers, policymakers and practitioners in the phenomena of social entrepreneurship, and, as one expression of social entrepreneurship, the development of social ventures (Short et al., 2009; Peattie and Morley, 2008; Mair and Marti, 2006). Whilst much of this interest has originated in the Western world, the practice of philanthropy was much more common in the Asian region. Indian culture and society supported philanthropy through various religious forms.

NATURE OF SOCIAL ENTREPRENEURSHIP LITERATURE

As a field of intellectual enquiry, social entrepreneurship is still very much in its infancy (Peattie and Morley, 2008; Mosher-Williams, 2006; Dees and Battle Anderson, 2006; Roberts and Woods, 2005; Johnson, 2000). Whilst academic interest in the field has gained momentum over the past two decades, the overall quantity of published academic studies is small, especially when compared with research into entrepreneurship in the mainstream, for-profit domain (Short et al., 2009; Desa, 2007; Johnson, 2000). The existing research is also multi-disciplinary, crossing many academic disciplines including economics, business management, sociology, marketing, entrepreneurship, sociology, anthropology, and social work. Primarily because it uses a case study approach to understand the functioning of training institutes for making policy suggestions.

The field of social entrepreneurship is also characterised by limited empirical research, with existing research focused on social entrepreneurship in limited geographic settings, namely the USA, the UK and parts of Europe. To illustrate this point, in their review of the 152 articles published in leading management and entrepreneurship journals, the study identified that 72 articles (48%) were empirical in nature, and only two of these were concerned about social entrepreneurship. Consistent with an emerging field, existing empirical research is also dominated by qualitative approaches (Short et al., 2009; Peattie and Morley, 2008). Another notable feature of the research landscape is the preponderance of articles by practitioners - articles which focus on descriptive case studies, lessons learned, and 'how-to' guides to social entrepreneurship, and are less concerned with theory building and issues related to robust research design.

As a consequence of its youthful and diverse nature, the field of social entrepreneurship lacks a logical theoretical framework (Short et al., 2009). It does not have the "deep, rich explanatory or prescriptive theories" (Dees and Battle Anderson, 2006, p. 39) which are typical of a more mature area. Furthermore, the multidisciplinary nature of research frequently makes it difficult to reconcile different approaches and contributions to the field. As a consequence, the field is rife with calls for more robust theory development, increased focus on empirical research (Mosher-Williams, 2006; Dees and Battle Anderson, 2006; Light, 2006), and a greater understanding of social entrepreneurship in other regional settings. This current research is a response to those calls.

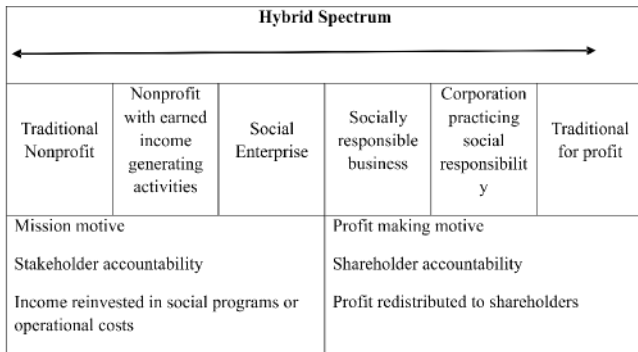## DEFINING AND CATEGORISING SOCIAL ENTREPRENEURSHIP

Defining and categorising social entrepreneurship necessitates some understanding of the term 'entrepreneurship'. This term has evolved from the French words 'entrer' and 'prendre' which means 'to enter' and 'to undertake' in English. The term gained considerable interest during the Industrial Revolution when it was used to describe individuals (entrepreneurs) who conceived of venture ideas, mobilised resources and took risks to create many of the ventures which contributed to that period of economic activity (Schaper and Volery, 2007).

Subsequent to the Industrial Revolution, economists and others have focused attention on entrepreneurship, yet despite their many contributions, a clearly understood and shared definition of the term remains elusive (Schaper and Volery, 2007). There are several reasons which account for this difficulty, notable amongst them, are the multifaceted nature of the phenomena and the fact that the study of entrepreneurship spans many disciplinary boundaries (Schaper and Volery, 2007). Generally speaking, definitions of entrepreneurship have tended to organise around two main perspectives – one that views entrepreneurship in terms of the central individual or actor (the 'entrepreneur'), and another which views entrepreneurship as a process, one which incorporates sources of opportunities; the discovery, evaluation and exploitation of opportunities, and the individuals who discover, evaluate and exploit those opportunities (Schaper and Volery, 2007).

The given figure depicts the various organizations on a hybrid spectrum where the extreme left-hand side represents the traditional nonprofit and traditional profit in the extreme right-hand side. Other types of organizations are represented in between based on

motive and accountability.

FIGURE NO:1 THE HYBRID SPECTRUM OF ORGANISATIONS

Hybrid Spectrum					
Traditional Nonprofit	Nonprofit with earned income generating activities	Social Enterprise	Socially responsible business	Corporation practicing social responsibility	Traditional for profit
Mission motive			Profit making motive		
Stakeholder accountability			Shareholder accountability		
Income reinvested in social programs or operational costs			Profit redistributed to shareholders		

Source: Adapted from Alter (2006) and Harman (2010)

OBJECTIVES OF THE RESEARCH

•   To trace the evolution of the term "social entrepreneurship"

•   To find the relationship between factors for the sustainability of social entrepreneurship in entrepreneurial training institutes.

•   To benchmark the best practices in entrepreneurial training institutes and to develop a model based on those practices.

RESEARCH METHODOLOGY

This research was underpinned by the constructivist paradigm. That paradigm holds that meaning and knowledge are contingent on human practices, "constructed, in and out of the interaction between human beings and their world, and developed and transmitted within an essentially social context" (Crotty, 1998). The constructivist position adopts a qualitative approach, maintaining that meaning is hidden and must be brought to the surface through deep reflection (Ponterotto, 2005). The interactive participant-researcher dialogue can stimulate this reflection. Thus, a distinguishing feature of constructivism is the centrality of the actor between the investigator and the object of investigation. Through this interaction between the investigator and his or her participants, deeper meaning can be uncovered.

The constructivist paradigm was appropriate for this research because of several reasons. Firstly, it suited the nature of the research problem, given that it was difficult to separate the individuals involved in creating social ventures from the contexts in which they operate

(Hussey and Hussey, 1997). Secondly, the phenomenon was non-linear, complex and multidimensional; individuals' own perceptions of social venture formation were highly relevant. Thirdly, the exploratory nature of the research warranted a less structured research design which provided sufficient space for relevant and interesting findings to evolve. Such a research design is consistent with the constructivist paradigm. Consequently, the constructivist paradigm influenced the choice of research method in the research. The research method is described in the following section.

This research employed a case study method. As mentioned in the previous section, this method is consistent with the assumptions of the constructivist paradigm and particularly well suited to understanding the effectiveness of Social Entrepreneurial Training Institutes. This section begins by defining and describing the case study method and goes on to provide the justification for its selection for this particular research.

DEFINING CASE STUDY METHOD

'Case study' is variously used to describe a paradigm, a form of research enquiry and a method. At the same time, the case study can serve quite different purposes – for research, for teaching and for record keeping (Yin, 2003). Each of these uses and applications evokes different meanings and has different implications. For this reason, it is important to clarify the meaning of the term in this particular research context. For the purposes of this research, the term 'case study' refers to a specific form of research enquiry, in which the researcher explores in-depth a program, event, activity or, as in the case of this research, a process. (Stake, 1995).

To provide a deeper understanding of the case study approach, it is useful to compare case study research with two other kinds of social research: the experiment and the social survey. In their comparison of the three approaches Hammersley and Gomm (2000) considered several dimensions; namely, the number of cases investigated, the amount of detailed information collected by the researcher, the level of direct control of variables, the kind of data collected, and the question of objectivity. Whilst recognising some blurring between approaches along the various dimensions, they used contrast to illustrate the nature of case study research. The following table highlights the differences between the three approaches in research.

TABLE: 1 COMPARISON OF CASE STUDY WITH EXPERIMENTAL AND SURVEY APPROACHES

EXPERIMENT	CASE STUDY	SURVEY
Investigation of relatively small number of cases	Investigation of relatively small number of cases (sometimes one)	Investigation of rela tively large number of cases
Information gathered and analysed about a small number of features of each case	Information gathered and analysed about a large number of features of each case	Information gathered and analysed about a small number of features of each case
Study of cases created in such a way as to control the important variables	Study of naturally occurring cases	Study of a sample of naturally occurring cases; selected in such a way as to maximise the sample's representativeness in relation to some larger population
Quantification of data is a priority	Quantification of data is not a priority. Indeed, qualitative data may be treated as superior	Quantification of data is a priority
Aim is either the development and testing of theory or the practical evaluation of an intervention	Main concern may be with understanding the case studied in itself, with no interest in theoretical inference or empirical generalisation. However there may be attempts at one	Aim is empirical generalisation, from a sample to a finite population, though this is sometimes seem as a platform for theoretical inference

Source: Hammersley and Gomm (2000)

Yin's definition of case study research is consistent with Hammersley and Gomm's understanding of the approach. Yin (2003) defines case study research as "an empirical enquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between the phenomenon and context are not evident" (Yin, 2003, p. 13). His definition of case study research also incorporates elements of practical application; including data collection techniques and specific approaches to data analysis (Yin, 2003). He points out that case studies cope with the situation where there are many more variables of interest than data points, and as such rely on multiple sources of evidence which must be triangulated, and which benefit from the development of theoretical propositions to guide data collection and analysis (Yin, 2003).

CASES OF SOCIAL ENTREPRENEURSHIP TRAINING INSTITUTES

Interviewees for this research included a representative of the social venture, usually the director. There are primarily three organizations that have been selected for the case study. They are SyndRSETI, Kanthari and RUDSETI. For convenience SyndRSETI and RSETI are synonymously used in the report.

CHARACTERISTICS OF THESE INSTITUTES

This section provides key characteristics of the parent organizations involved in this research. It identifies their legal structure and status, their purpose and the social activities they are involved in. It goes on to detail their size and scope, sources of revenue, and experience with social enterprise. The section concludes with a summary of the key similarities and differences between the organizations at the time this research was conducted.

HISTORY OF SOCIAL ENTREPRENEURIAL TRAINING INSTITUTES

Rural Self-employment Training Institutes (RSETI) are mostly managed by nationalized banks in India with active co-operation from central and state governments. The major objective of RSETIs is to impart knowledge and training to rural Below Poverty Line (BPL) youth to mitigate the unemployment problem. RSETI concept first emerged from Rural Development and Self-employment Training Institute (RUDSETI) - a society established jointly by three agencies: Syndicate Bank, Canara Bank (two major nationalised banks in South India) and Sri Manjunatheswara Trust based at Dharmasthala, Ujire in Karnataka, India. Now as per government mandate, every district in India has one RSETI and the lead bank in that district takes responsibility for constructing and managing that RSETI.

RSETI was initiated to address the social problem of unemployment in a South Indian state, Karnataka. Dr. D. Veerendra Heggade a philanthropist, and a hereditary administrator of Dharmasthala temple initiated the concept in 1982. During that time unemployment was severe in the country and lots of people were approaching Dr. D. Veerendra Heggade for jobs and for recommendations to get into nationalized banks and other reputed institutions. By understanding the need of the people in the region, he decided to give training to the unemployed youth in the region to embark upon self-employment activities. To quote the founder "Instead of writing someone else's account through wage

employment, after three to five years of collegiate education, it is meaning full to write one's own account by embarking upon some self-employment".

RUDSETI AS A SOCIAL ENTERPRISE

One of the objectives of this research is to identify the factors of sustainability in entrepreneurial institutes. "The essence of sustainable development is to provide for the fundamental needs of humankind in an equitable way without doing violence to the natural systems of life on earth." (Kemp and Martens, 2007, p. 5) According to Jerry Courvisanos, for an organisation to be sustainable, it needs a productive union of mind and nature to protect the interest of people associated with the business, the planet as a whole and the profit making of investors. The organisation should have support from local, state and national communities. So, history objectives, organisation structure, functioning and contribution of RUDSETIs to society have been carefully analysed to measure its sustainable development.

MISSION TO ADDRESS SOCIAL ISSUE

Dr Veendra Hegde decided to initiate RUDSETI to impart training to the unskilled youth in rural India. So, the core mission of RUDSETI was to provide self-employment for the unemployed youth in rural India.

SUCCESSFUL INNOVATION FOR SOCIAL CHANGE

RUDSETI as an organization was the first concept that evolved during those times. The founder initiated this organization with a new model of pooling capital from Syndicate Bank, Canara Bank and Sri Dharmasthala Manjunatheswara Trust. He has set up an independent trust to start this organization and for meeting day to day needs of the organization.

RUDSETI EMPOWERS COMMUNITY

RUDSETI primarily focuses on training unemployed below poverty line youth in the areas of skill demand. In rural India always there is a need for tailors, beauticians, motor vehicle repairers and electronics equipment repairers. RUDSETI understanding the requirement of the skills in these areas started providing training in these identified areas. These efforts have obviously helped those regions to bridge the gap between the lack of such services and unemployed youth in the region.

FAILURE OF PUBLIC SECTORS IN SKILL EMPOWERMENT

Throughout India, there is a marginal population which couldn't have access to any kind of formal education provided by any public or private institutions. Most private institutions are not affordable for this rural youth or there is limited credit availability to pay off the tuition fees. There is high competition that prevails in the government institutions and these rural youth are deprived of their opportunity to attain technical education. Here you could see that RUDSETI serve the purpose of bringing equality to society by providing education and training to the marginal section of society.

In RUDSETI's annual report, we can also see the emphasis on efficacy. Quantitative facts constitute the main content of the report. Numbers like settlement rate, number of trainees, and number of programs are listed. However, despite the difficulty to measure the real efficacy with these numbers, researchers argue that the motivation for chasing efficacy inside RUDSETI is quite different from that of the ideal social enterprise described by Dees (1998a, 1998b). Nevertheless, the motivation to seek the efficacy of RUDSETI comes from the organization's expansion and its evolutionary process.

SyndRSETI (SYNDICATE BANK RURAL SELF EMPLOYMENT TRAINING INSTITUTE)

Synd RSETI, Manipal was established on 2nd October 2000. SyndRSETI is a non-profit organisation owned by Syndicate Rural Development Trust (SRDT). This trust was formed by Syndicate Bank having head office in Bangalore. This trust is completely owned and administered by Syndicate Bank. In India, there are a total number of 16 SyndRSETIs and four SyndRSETIs in Karnataka. The vision is to create self-employment awareness among rural youth. Particularly need based education is given to candidates to make students self-sustainable so that they can earn their livelihood. Sometimes several general training is given to candidates to make them aware of self-employment opportunities, and training in specific areas is given if there is a requirement. More focus is given to need based training, as candidates should decide the field in which they need to be trained, which creates self-motivation. Above all, there should be market demand for that particular skill set in which they are trained, this will make them more employable. SyndRSETIs are in constant touch with local government bodies, and people in need through gramasabhas (village gatherings). Other than training, SyndRSETI also provides financial support for those who are in need of setting up an enterprise.

The organisational structure of SyndRSETI is typically a bank structure. Deputy Manager is the main

trustee of SRDT and it is a statutory position, whoever is appointed as Dy Manager will act as the trustee of this institution. Deputy Manager is at the top, then the Dy General Manager, Area General Manager, Chief Manager, Senior Managers and Directors of RSETIs. Senior Managers are in charge of all RSETIs. Under Directors of RSETIs there are teaching faculties, then office assistants and attenders. Different types of Entrepreneurship Development Programs (EDPs)have been conducted by SyndRSETIs. They are:

• Agriculture EDPs

• Product EDPs

• Process EDPs

• General EDPs

The geographical scope of Synd RSETI is relatively flexible. Even if SyndRSETI, Manipal operation is primarily limited to Udupi District in Karnataka but if candidates outside Udupi are interested in attending an EDP they are allowed to participate.

The primary source of this RSETI funding is from Syndicate Bank. The three-tier local governing bodies also help SRDT with finance. State Government organisations created for women empowerment also support SRDT financially. National Bank for Agriculture and Rural Development (NABARD) also finance SRDT initiatives.

Syndicate Bank appoints managers who have the aptitude for rural development as Directors of RSETIs. Particularly those who have experience as Rural Development Officers (RDO) or those who have finished professional education in rural development or agriculture appointed to RSETI. Block level Bankers Committee meeting decides upon the administrative matters of RSETIs.

Marketing channels of RSETIs have been impacted due to changes in technology and in particular because of social media. A program which is offered in a particular district is getting wide coverage due to social media, which enables candidates from different districts to participate in an intended program. Accommodation is provided near the institute if they are far from residence. Morning breakfast, lunch, evening snacks and dinner are also provided for candidates. All these expenses are borne by the institute itself.

Candidates are given handholding support for up to 3 years, which means RSETI assist candidates to apply for bank loan and government subsidies. If they require any technical assistance in learning a particular skill, RSETI gives guidance. Follow up visits and meetings are made to ensure the sustainability of their enterprise.

Course information needs to be provided to Syndicate Bank for compliance. Contents of EDP include self-introduction through the micro lab where candidates are given time to mingle each other and get to know each other. They introduce themselves, presents the strength and weakness and problems in a family to each other. A more holistic way of learning happens at RSETIs. Time management, project preparation, liaison with bank officials, and how to speak with customers are the topics primarily covered during a training session.

INNOVATION AND CHALLENGES OF SyndRSETI

Every year SyndRSETI prepares the annual budget and submits it to the Corporate office, Syndicate Bank, Banglore for approval. The average revenue expenditure for the last three years is around 25 lakhs rupees. (2.5 million). Syndicate Bank has initiated SyndRSETI because of the public service motto. To quote the SyndRSETI Director:

"Syndicate bank is the first bank to provide loans for agricultural sector. During the time of the post-independence era, credit availability was minimum to farmers and weavers. Dr TMA Pai initiated the bank with the objective of collecting small savings from households and lending it to the needy. Till now you find that most of the private banks are focusing on the manufacturing and service sector for loan disbursal. Moreover, during the late 1990s, there was severe unemployment in the country. Whenever a bank calls applications for an officer's post of 1500 vacancies, it used to get more than 300,000 responses. At that time bank decided that it will not be able to provide jobs for all these candidates, but can make them entrepreneurial. Instead of seeking government jobs, they can run their own business and provide jobs for others."

Several creative and innovative pedagogies are used by the institute for making inspired learning environment in SyndRSETI. A few of them are ring toss games, which teach candidates about risk taking techniques at the time of new venture creation. Institute advises candidates to take less risk during initial days with low investment and as the business expands, they can take higher risk. This is taught through this game, which will be much more striking in candidates' minds than a lecture based classroom. Another simple example is 'boat building activity' game. In this activity, candidates

are asked to make reliable and aesthetic paper boats within a given time. This is a formative learning assessment for communication and coordination among the candidates. According to the institute director, "Every candidate should be able to give quality service within a time frame with a competitive price".

Some of the challenges faced by the institute are lack of candidates for Agriculture based EDPs and a large number of applicants for some courses like tailoring, stitching and fashion designing. Similarly, ladies' beauty parlor training has higher demand in the market. Generally, you find candidates are more interested in computer based training and other white collar jobs but rarely interested towards agriculture and blue collar opportunities. Another major challenge is women outnumbering men when comes to participation in these programs. This is primarily because the community is yet to realize the potential of entrepreneurship when it comes to making a sustainable living. In Udupi district of Karnataka, a comparatively very less number of youth are entering into the field of agriculture. Society's preference towards certain segments of employment creates an imbalance in training choices.

FUNCTIONING OF SyndRSETI

Discipline is another important aspect of any educational institution. Very strict discipline is followed in SyndRSETI Manipal. Even if there is no formal code of conduct and disciplinary committee in the institute, disciplinary violations are treated with utmost seriousness. This is conveyed through oral means on the first day of training. "Only candidates who are serious (in studies) are requested to be part of the training. Otherwise, they requested to leave the institute immediately" according to the Director, SyndRSETI, Manipal.

SyndRSETI MANIPAL RESOURCES

SyndRSETI Manipal has classrooms, a practical lab, a computer lab, dormitories for trainees, a conference hall, a library facility, staff cubicles and a director's room. The total facility is around 800 sq. feet of floor area. A total of 5 staff are employed including the Director. Usually, SyndRSETI hires trainers in a particular trade on a contract basis for a period of 2-4 weeks based on the training duration. On average Syndicate Bank set aside around 20 lakhs (2 million) rupees for this institution every year. The rest of the funds are generated from the government and other agencies.

KANTHARI (FORMERLY KNOWN AS INTERNATIONAL INSTITUTE FOR SOCIAL ENTREPRENEUR)

An interview with Sabraine, cofounder reveals that Kanthari, earlier known as International Institute for Social Entrepreneurship depends on several charitable contributions for its day-to-day activities. Even if the institute is financed through the fees of its trainees but it encourages its participants to be funded by contribution. Paul and Sabrine's first social venture was in Tibet, Nepal. "...It was a school for the blind and it was the first school for the blind in Nepal and it was a vocational training centre and a self-education centre, where blind children have been trained and inducted to normal school. This means blind children can learn without social educators in many cost-effective ways. This is a good means to empower blind children and it is a new concept and educators around the world are discussing this. As it is a new sector, initiative attracts a lot of criticism". This points to the ability of the founder to take new initiatives and face the challenges during its course. In this case, the founders started an educational institution without much experience.

HISTORY OF KANTHARI

The decision to start an educational institution was not made all of a sudden. Sabrine, one of the founders was interested in Tibet and started studying Tibetology. She found that there is no braille system in Tibet so she decided to introduce the braille system in the country. She started a school for the blind in the year 1997 along with co-founder Paul who is an Engineer from Holland. They started with preparatory school, then ventured into vocational training farms, cheese factories and bio-bakery with market gardening, greenhouses, animal husbandry and so on. These vocational training centres are into training massage clinics and self-integration projects. Most of the candidates who have got training are successful entrepreneurs or engaged with their social ventures. Some examples are kindergarten for blind and sighted kids. Founder claim that 80% of students who have got training are really successful. "How it was possible in a region where people were so skeptical about the abilities of the blind? And Tibetans believe that blindness is a punishment for something you have done in your past life". But there are some benefits, society had no expectations from them. Kanthari built a very strong ethics in these blind kids. Particularly on matters like punctuality and honesty. Institute also taught them to solve problems by embracing their weakness.

Kanthari wants students to have the broadest imagination, dream about their future and paint it with the most beautiful colors. One of the good examples is when one of the blind students wants to be a taxi driver. But later he realised he cannot be a taxi driver, but he started a taxi company. Some started Hotels, the biggest massage clinic in Tibet, Kindergarten, braille book production center etc. This made Sabrine think beyond Tibet and blind people. Particularly into problems like Poverty, environmental destruction, physical disability, Women, transgender etc.

BACKGROUND OF FOUNDERS

At the age of 26, Sabrine started Brille Without Borders, she studied Tibetology, Sociology and Philosophy at the University of Bonn in Germany and later dropped out of college before examination because she had an opportunity to start this school for the blind. Sabrine become blind when she was at the age of 12 years and she has sight before. So she is aware of both worlds, sighted and blind. She was in regular school in the beginning and later she became blind slowly and steadily. So later she joined a blind school. The special school where she studied is a highly academically reputed institution, which gave her a good base for her studies. This was the reason for Sabrine to have a lot of social ideas. She had a lot of social interest also because of the pinching part. She says that all these Kantharis have this pinching point. What she meant by pinching point? "It is a point of time where an individual wakes up and says that he needs to change something in life".

PINCHING POINT OF THE FOUNDER

Sabrine describes the pinching point time in her life: Sabrine was student president during her college days and the German army was celebrating its 40th anniversary. They wanted to celebrate it in that University because it was beautiful and the city of Bonn was considered the seat of the army in Germany. She got an opportunity to make a speech and, in the program, she questioned the presence of the army in the University. At that young age, she argued that the army and education has nothing to do in common. On the stage, she heard one dean leaning over and telling others that first she is blind and now she wants to open her mouth. Sabrine believes that it was the luckiest and happiest moment in her life. She found her goal and mission in life through this instance. While speaking about this, we could see her determination in her voice.

She wanted blind individuals to have primarily four rights:

- Right to be blind without being disabled
- Right to voice the opinion beyond blind community
- Right to take over responsibilities
- Right to risk and get empowered

RISK-TAKING ABILITY OF FOUNDERS

Through these rights, she believes that marginalized people can become change agents.

Sabrine first selected Nepal because she thought it would be a challenging location, take up risks and come out of his comfort zone. It was also an escape from Germany, which was very over protected. Her risk-taking ability was prominent during this discussion. Sabrine loved horses and horse riding, water and kayaking and mountaineering. But Tibet was not the right place to start a global institute like Kanthari. She wanted to start an institute for the marginalized and not a usual school or college because the success of a social entrepreneur doesn't depend on her educational qualification. From her experience people who are from tribal communities, those hardly been to school have been very successful in their ventures.

South India is considered to be the centre of the world while considering Africa and Asia on either side. Institute was considered to be a springboard where trainees gain energy and were able to jump off into the water and swim. She likes Kerala because of its beauty but still identifies the issue of this place as environmental pollution and gender issues. The ability to identify social problems and provide innovative solutions for them is a quality in this leader. Sabrine didn't select any other developed country for her work because she believes there are less evident problems in society where a social entrepreneur can intervene.

RESOURCE RELATED ISSUES

One of the major obstacles she faced in setting up this institute is finding the right people for the right job. Another major challenge is creating a curriculum for such a diversified group where some are Ph. D.s and others who never been to school. That's why they thought curriculum to be tailor made which is absolutely hands-on and practical. So this is to do with having experience with the group rather than pouring knowledge over them. It took more than a year for them to have the right team in this institute. Qualities which they look at in the Kantharis are the ability to question and challenge the status quo. Come up with new ideas and develop new products with

their own ideas and have international exposure to deal with people from different countries.

Various systems in India were very supportive of this organization except for a few raised eyebrows about the identity of the organization. Recently IISE got accredited as the only vocational institute for giving leadership training for social change by NABET.

They understand that getting financing in India is most difficult and particularly because of the regulation, getting funding from foreign sources was even more difficult. So they started collecting funds in the form of tuition fees from students. All students are not able to pay tuition fees so they may find sponsors or the institute may find sponsors for themselves. For the majority of the students, the institute may find sponsors.

Land acquisition was possible because founders became residents of India and so they had the right to purchase property. Innovative ways of construction are used for building the institutes. Using bricks of mud, and clay and using less metal, concrete and stones except for pillars. Building is so environmentally friendly and suitable for tropical climate with a lot of ventilation. The roof is made of thin concrete layers with roof tiles in between which reduce the heat inside the building and reduce the cost of roofing. This was possible because Paul's co-founder was an engineer and he thought about it thoroughly. The water system in the institute is carefully designed with no pollutants emitted to the nearby lake. Waste water is used for irrigation of the land and solid waste is used for producing biogas and later as fertilizer. Rainwater harvesting is utilized as a water source and it is stored under the building in clay tile tanks, which reduce the temperature inside the building. This water is pedalled up using bicycles to the overhead water tanks, which are later heated by solar energy for hot water requirements. The purpose was to create a sustainable building at a low cost which is appealing and inspiring for the inhabitants. There were some labour issues in the beginning because of the union and mechanization of the labour and construction of buildings, but later community and society became very supportive of this project.

CANDIDATES AND CURRICULUM

Selection of candidates is a very tough selection process at IISE. Institute selects the best among individuals with creativity, vision, tolerance, strong personality, sensitivity, emotional quotients, high intrinsic motivation. Primary interview is conducted to have a first level assessment of candidates. Then essay writing interlinks the vision and the personal life of the candidate, then a psychological interview for one hour to assess the mental strength of the candidate, then a stress interview to check whether they can cope with the institute's environment for 9 months. Finally, among around 350 applied candidates 25 are selected for the program.

Sabrine believes that the most important aspect of the institute is the curriculum. She wanted the curriculum to be updated which means relevant and usable. She believes that most of the things which we study today are not applicable. What is really needed to start a sustainable social project? Sabrine and Paul carefully go through the mistake they have made and learn from them. These mistakes were the foundation of the curriculum. So institutes try to impart practical experience to their trainees. Institutes want them to fail and learn how to survive failures. Self-learning pedagogy is mostly used in the curriculum. One example is fundraising telephonic calls. Trainees learn by doing, they actually make a call to someone who mocks as a prospective fund donor and tries to convince them. Every Saturday becomes a Transalesia (fictitious country) day when trainees try to implement their venture ideas with all practical difficulties, which is a real time experience for all candidates.

IISE curriculum includes:

- Developing Vision and Mission
- Researching the problem
- Understanding the problem to be solved
- Target group- What are their needs?
- Proposal writing
- Fundraising techniques
- Project planning, project management
- Advanced Public speaking
- Competitive Communication skills

The final examination of every trainee is in the form of a public presentation ('Kanthari talks'). Potential donors may be in the group, or on live streaming, which offers them funding for start-up.

SUGGESTIONS AND CONCLUSION

From the viewpoint of entrepreneurial training institutes and their stakeholders, effectiveness is about providing a sustainable livelihood for its trainees and empowering youth who much adaptable to changing social needs of the world around them. This 'sustainable livelihood' or

'social empowerment' should be achieved through creating awareness, self-empowerment, creativity and management skills in the participants. The effectiveness of training institutes can be measured in terms of settlement ratio, number of training programs conducted, variety of programs conducted and diversity of participants. Settlement ratio means out of the number of people trained how many have started their enterprise or are able to find better employment. Regarding the number of training programs, all RSETIs are getting directions from the National Academy of RSETIs (NAR). There is the requirement of a minimum number of programs which need to be conducted and the number of hours of training which need to be imparted. Even though the programs are in demand driven RSETIs are advised to bring diversity to the programs offered. Along with diversified programs, RSETI should also target for varied candidates for providing training. So, diversity in participants in the form of age group, gender, religion, caste, mother tongue, sexual orientation, education, income level etc. is considered while offering program. In one of the selected programs, SyndRSETI, Manipal offered personality development programs for transgenders in Udupi district. This shows the innovativeness and effectiveness of these institutes. RSETIs are effective while considering its vision, mission and objective. The research suggests that these institutions should be promoted better creativity and innovation by giving higher autonomy in functioning.

SUMMARY

The research has presented a picture of the best practice models which is more innovative, complex, dynamic and feedback-driven than is evidenced by earlier models of social venture formation. The resulting model of best practices developed from the case study evidence captures that dynamism. It presents social venture formation as a process which evolves through time (yet is not time dependent), which is cyclical (yet has an underpinning forward direction), and comprises a series of sub-processes linked by bridges representing the mobilisation of stakeholder interest and support. Each of these subprocesses and the bridges that connect them are orientated towards creating social value. Venture development is a purposeful process as individuals interact with others to recognize the venture idea, procure resources, assemble the venture and then engage in the development, all the while seeking to obtain and then maintain stakeholder support. The model also highlights how facilitating factors, such as culture, innovation, resources, favourable policy environment, individual knowledge and learning, and networks, facilitate development. In the end, this research contributes significantly to improve the effectiveness of social ventures. It sheds light on best practices which has been relatively understudied in the research domain and which, for the most part, are invisible to observers. It provides richness and subtlety to our knowledge and understanding of that process and it opens up new avenues for future research. Overall, this study represents a major step towards the development of Social Entrepreneurship.

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FACTORS INFLUENCING SMARTPHONE BUYING BEHAVIOUR AMONG GENERATION Z

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INTRODUCTION

Smart phones can be defined as multifunctional cell phone devices that provide, in addition to basic voice communication and messaging capabilities over enhanced wireless networks, advanced mobile computing capabilities and "smart" applications through a touch interface" (Ashraf Bany Mohammed, 2018). The younger generations, especially Generation Z, are technologically savvy and have access to all smart devices, especially smart phones. Selling smart phones is a win-win situation for marketers. On one hand, marketers have to offer innovative features in their smart phones, and on the other hand, they need to meet the expectations of the younger generation. Hence, it is necessary to understand the factors that facilitate the purchase of smart phones from both buyers' and sellers' perspectives. This study examines the factors that influence Generation Z to purchase smart phones.

AIM OF THE STUDY

Today's technology creates advanced and revolutionary changes in our lives. This intelligent device, which surpasses its predecessors in every aspect, has deeply impacted the lives of the younger generation, making their day-to-day activities more convenient. The market potential of Generation Z consumers is immense, leading smart phone marketers to strive to meet their needs and desires. Various factors from both the buyers' and sellers' perspectives influence purchasing behavior and the overall experience when buying a smart phone. This research focuses on identifying the factors that influence Generation Z's buying behavior, as well as their satisfaction and expectations during the smart phone purchase process.

SCOPE AND SIGNIFICANCE OF THE STUDY

This study would be of interest to smart phone marketers and smart phone accessories producers, as it aims to provide insights into the significance Generation Z consumers place on smart phones and their expectations and satisfaction levels with marketers. Understanding these factors is crucial for marketers, as the consumer is at the center of their decision-making process. The findings of this study can aid in developing effective marketing strategies tailored to this important demographic.

RESEARCH PROBLEM

The growing popularity of smart phones has brought about significant changes in the lifestyles of young consumers. Factors such as changing lifestyles, a large young population, affordable prices, and the availability of data services play a crucial role in driving the growth of the smart phone market. The demand for digital devices has particularly impacted Generation Z, leading to substantial changes in their lifestyles. Kerala represents a potential market in this context, given its sizable young population, making this study relevant for addressing the challenges faced by marketers. However, only a limited number of studies have examined the factors influencing buyer behavior and experience from both the buyer's and seller's perspectives, with minimal focus on the buying behavior of the younger generation. This study aims to bridge that gap and assist marketers in their future research and development efforts. Understanding the demographic

profile of Generation Z is crucial for marketers to gain deep insights into this complex consumer group. Additionally, limited research has explored the satisfaction and expectations of the younger generation when purchasing smart phones. This study aims to fill that research gap.

RESEARCH OBJECTIVES

The main objectives of this research are as follows:

1. To examine the socio-economic profile of Generation Z buyers involved in Smart phone purchases.

2. To measure the influence of buyer awareness, preference, social factors, and purchase intention on Smart phone purchases among Generation Z buyers.

3. To assess the influence of service quality and promotional campaigns by the seller on the purchase of smart phones among Generation Z buyers.

4. To investigate the buyer behavior and experience regarding smart phone purchases among Generation Z buyers.

5. To evaluate the satisfaction and expectations of Generation Z buyers regarding smart phone purchases.

6. To understand the relationship between buyer-specific factors and seller-specific factors in relation to buyer behavior and experience.

RESEARCH DESIGN AND METHODOLOGY

This study focuses on Generation Z consumers from the state of Kerala. The population for the study comprises individuals between the ages of 6 and 24 in Kerala. As they are born into a world of smart phone technology, they possess the capability to respond to matters related to smart phones and have become decision-makers within their families. Individuals born at the end or beginning of a generation are known as cuspers, with older members of Generation Z potentially exhibiting millennial characteristics, while younger members may display characteristics of the Alpha generation. Therefore, the researchers have specifically considered the age group of 15 to 20. According to the 2011 census data from the official portal of the Government of India, the total population within the age group of 15-20 among municipal corporations in Kerala is 1,606,732. To obtain the required age group, students

in higher secondary school were considered. The recommended sample size was 372, but to ensure more precision in the analysis, data was collected from a larger sample, resulting in the distribution of 837 questionnaires among upper secondary school students. Due to incomplete questionnaires, 69 were rejected, resulting in a final sample size of 768. Data collection took place from April 2019 to March 2020, with the assistance of teachers approaching students in their respective higher secondary schools. The study utilized a multi-stage sampling technique. In the first stage, a municipal corporation was randomly selected using simple random sampling. The state of Kerala is divided into six parts based on the municipal corporations, namely Kannur, Kochi, Kollam, Kozhikode, Thiruvananthapuram, and Thrissur. In the second stage, one ward from each municipal corporation was randomly chosen. Finally, a higher secondary school in each ward was selected randomly in the third stage.

DATA ANALYSIS

The dataset obtained was analyzed using IBM SPSS 21.0, employing various descriptive statistics such as Percentage Analysis, Cross Tabulation, and Inferential Statistics including Chi-Square Test, ANOVA or F-Test, Kolmogorov-Smirnov Test, Multiple Regression Analysis, and Factor Analysis. Additionally, Structural Equation Modeling was conducted using IBM AMOS 22 to gain a deeper understanding of the relationships between variables. For text analytics of open-text survey responses, an online word cloud generator called "word art" was used to generate visual representations.

SUMMARY AND FINDINGS

The demographic profile of the respondents indicates the inclusion of both male and female students from urban and rural areas. The seniority of the students and their level of education may influence their smar tphone purchasing decisions. Similarly, parental occupation and family income can also determine the desired price range and quality of smart phones for purchase. The primary motive for smart phone usage is for family purposes. Students prefer to buy smart phones from multi-branded retail outlets, with Samsung being the most preferred brand among them. The majority of students are willing to purchase smart phones in the price range of Rs. 10,001 to Rs. 20,000. Payment

through cards is the preferred mode of transaction. Peer groups serve as the main source of information about smart phones, and part-time jobs provide additional financial means for smart phone purchases. Entertainment activities are the primary purpose of smart phone usage among students. There are differences between students residing in urban and rural areas when considering the desired features in a smart phone for purchase. Social factors have a direct impact on smart phone purchase decisions, and significant differences exist among students from urban and rural areas. Effective service quality can attract students to buy mobile phones from specific dealers or companies. Social factors play a crucial role in influencing smart phone purchase decisions. Results indicate that purchase intention is another important buyer-specific factor, influenced by gender, educational stream, and number of siblings, purchase experience, parental occupation, and monthly family income. The quality of the seller also influences students' smart phone purchase decisions. Customer-centric promotional campaigns capture students' attention when making phone purchases. Various factors such as model comfort, price, brand comparison, expert recommendations, brand reputation, and innovation significantly influence students' buying behavior and experience when purchasing smart phones. Features and specifications of smart phones, dealer performance, and mobile brand all directly impact student satisfaction with their mobile phone purchases. The most anticipated feature for Generation Z buyers is an unbreakable screen. The majority of respondents also own phone cases along with their smart phones.

DISCUSSION OF THE RESULTS

• The demographic profile of students is crucial in understanding a specific group. Smart phone purchases are equally popular among students in rural and urban areas. The students have sufficient experience in buying smart phones and prefer shopping at retail stores. Samsung, Xiaomi, Honor, and Oppo are some of the most popular international brands. Urban students prefer digital payments, while rural students prefer cash payments. Students like the price range of Rs. 10,001 to Rs. 20,000. The majority of students' parents are employed, and their monthly income enables them to purchase smart phones for

their children. Entertainment, messaging, and information searching are the main purposes of smart phone usage.

• Buyer-specific factors such as brand awareness and preference, social influences, and purchase intention play a role in smart phone purchases. Students in both rural and urban areas are familiar with smart phone operations, battery capacity, and durability, but they are unaware of the smart phone manufacturer's country of origin. Rural students desire features such as mobile warranty, performance and heating, navigation and positioning, multimedia options, processor, display quality, and voice-activated calling. Urban students desire features such as mobile warranty, display resolution, performance and heating, navigation and positioning, processor, dimensions and design, networks and connectivity, and voice-activated calling. The study found a considerable disparity between rural and urban students. Students frequently seek feedback from their social circle, including family members, friends, media, opinions, and reviews of available smart phone models, which directly impacts their purchasing decisions. Purchase intention is influenced by factors such as mobile quality, dealer reputation, usage options, price, connectivity, quality, and services. Both rural and urban students exhibit similar purchase intentions.

• The service quality and advertising campaign of the seller are seller-specific factors in this study, significantly influencing students' decisions to purchase smart phones. High-quality service from a specific dealer or company can encourage students to purchase mobile phones. The seller's service quality is directly related to the student's family gender, number of siblings, purchasing experience, and monthly income. Birth year, number of siblings, purchasing experience, parents' primary occupation, and family's monthly income are factors in the seller's advertising campaign.

• Rural students' purchase behavior is similar to that of urban students. Factors such as comfortable models, affordability, brand comparison, expert advice, brand reputation, innovation, and others influence students' smart phone purchasing behavior and experience. Findings show that the number of siblings, parents'

primary occupation, and family's monthly income has a direct impact on satisfaction with smart phone purchases. Rural students' satisfaction is similar to that of urban students. Features and performance of the phone, dealer, and mobile brand all directly impact students' satisfaction with their mobile phone purchases. Expectations include low repair and damage costs, waterproof models, more service centers, replacement warranties, prompt response to complaints, friendly employees at authorized service points, privacy protection against cybercrime, device safety against malware/virus, warranty extensions, and phone longevity. Residential position does not have a significant relationship with various smart phone expectations of students.

• It is noteworthy that both seller-specific and buyer-specific factors directly impact students' buying behavior and experience in smart phone purchases. Generation Z purchasers are most excited about unbreakable screens, followed by higher megapixel cameras, faster charging, and increased battery capacity. Students prefer to buy accessories along with their smart phones, and the respondents own phone cases. They are also eager to purchase power banks, neckband earbuds, memory cards, and fast chargers.

CONCLUSION AND RECOMMENDATIONS

The study focuses on the factors that influence smart phone purchasing behavior among Generation Z, considering both the buyers' and sellers' perspectives. The study also takes into account buyer satisfaction and expectations during the purchase process, as well as the differences in smart phone purchases between rural and urban students. It is noted that buyer-specific factors, such as brand awareness and preference, social factors, and purchase intention, along with seller-specific factors like promotional campaigns and seller service quality, significantly influence the decision of Generation Z to purchase a smart phone. The study concludes that smart phone manufacturers should pay attention to both buyer-specific and seller-specific factors to foster positive buying behavior and experience, ultimately increasing buyer satisfaction by meeting their expectations in smart phone purchases.

BOOK REVIEW

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INTRODUCTION

"Zero to One" is an enlightening and captivating book written by Peter Thiel, a renowned entrepreneur, investor, and co-founder of PayPal. Published in 2014, the book serves as a guide for aspiring entrepreneurs and provides invaluable insights into building successful startups and fostering innovation. Thiel challenges conventional thinking, advocating for the creation of entirely new ideas and monopolies rather than incremental improvements. In this comprehensive book review, we will delve into the key themes, concepts, and arguments presented by Thiel, providing a thorough analysis of the book's strengths and weaknesses

CHAPTER SUMMARIES

Chapter 1: The Challenge of the Future

Thiel starts the book by discussing the imperative of innovation and the importance of developing new technologies and ideas. He highlights the significance of going from "zero to one" by creating something entirely new rather than competing in an existing market. Thiel argues that progress comes from vertical progress, which involves generating and capturing new value, rather than horizontal progress, which involves spreading existing value more efficiently. He emphasizes the value of monopoly and suggests that entrepreneurs should strive to create businesses that dominate their markets.

Chapter 2: Party Like It's 1999

In this chapter, Thiel analyzes the dot-com bubble of the late 1990s and early 2000s, discussing the lessons learned from that era. He critiques the prevailing belief in rapid growth without a solid business model, highlighting the importance of building sustainable companies rather than chasing short-term market trends. Thiel argues that the dot-com bubble created a negative impact on entrepreneurship by promoting superficial growth and a lack of focus on long-term value creation.

Chapter 3: All Happy Companies Are Different

Thiel asserts that successful companies are unique and possess characteristics that set them apart from their competitors. He emphasizes the need for entrepreneurs to develop a clear vision and build a strong company culture. Thiel suggests that differentiation is crucial for long-term success, and companies should strive to create a "secret" or

proprietary technology that gives them a competitive advantage. He illustrates this concept with examples from successful companies like Google, Facebook, and PayPal.

Chapter 4: The Ideology of Competition

Thiel challenges the prevailing ideology of competition, arguing that intense competition is detrimental to business success. He posits that competition erodes profitability and discourages companies from pursuing innovation. Thiel suggests that instead of engaging in cutthroat competition, entrepreneurs should aim to create monopolies or near-monopolies by offering unique products or services. By doing so, they can secure long-term success and avoid being dragged into the red ocean of fierce competition.

Chapter 5: Last Mover Advantage

Thiel introduces the concept of the "last mover advantage" and argues that being the first mover in a market is not always advantageous. He highlights that successful companies like Google and Facebook were not the first in their respective markets but rather improved upon existing ideas. Thiel emphasizes the importance of timing, execution, and adaptation in business success. He advises entrepreneurs to carefully analyze market dynamics and enter at the right time to secure the last mover advantage.

Chapter 6: You Are Not a Lottery Ticket

In this chapter, Thiel encourages individuals to take control of their destinies and avoid relying on luck or chance. He emphasizes the need for deliberate planning, perseverance, and hard work in entrepreneurial endeavors. Thiel suggests that success is not a matter of chance but a result of deliberate actions and intelligent decision-making. He critiques the Introduction

"Zero to One" is an enlightening and captivating

book written by Peter Thiel, a renowned entrepreneur, investor, and co-founder of PayPal. Published in 2014, the book serves as a guide for aspiring entrepreneurs and provides invaluable insights into building successful startups and fostering innovation. Thiel challenges conventional thinking, advocating for the creation of entirely new ideas and monopolies rather than incremental improvements. In this comprehensive book review, we will delve into the key themes, concepts, and arguments presented by Thiel, providing a thorough analysis of the book's strengths and weaknesses. The prevailing belief in luck emphasizes the importance of personal responsibility and strategic thinking.

CONCLUSION

"Zero to one" offers a wealth of wisdom for entrepreneurs, aspiring business leaders, and innovators. Thiel's contrarian viewpoints and thought-provoking arguments challenge conventional wisdom and inspire readers to think outside the box. While some may find his ideas controversial or overly idealistic, the book presents a refreshing perspective on entrepreneurship and innovation. Thiel's writing style is concise and accessible, making complex concepts understandable for a wide range of readers.

The strengths of "Zero to One" lie in Thiel's deep understanding of business dynamics, his experiences as an entrepreneur and investor, and his ability to convey complex ideas in a straightforward manner. The book provides practical advice, compelling arguments, and numerous real-world examples to support Thiel's assertions. However, some readers might find the book overly focused on the tech industry and limited in its applicability to other sectors.

In summary, "Zero to One" is an enlightening and thought-provoking book that challenges conventional thinking and encourages aspiring entrepreneurs to create something truly unique and impactful. Thiel's emphasis on vertical progress, differentiation, and the value of monopolies presents a fresh perspective on

startup success. Regardless of whether readers agree with all of Thiel's ideas, "Zero to one" is undeniably a valuable resource that sparks innovation, fosters critical thinking, and inspires individuals to strive for transformative change in their entrepreneurial pursuits.

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I, Rev. Fr. Paul Nedumpurath, hereby declare that the particulars given herein are true to the best of my knowledge and belief

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