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ABOUT WIJAR

The *Westcliff International Journal of Applied Research (WIJAR)* is a multi-disciplinary, open access journal, pioneered by the faculty at Westcliff University. The first issue was published in the spring of 2017.

The fundamental objective of the *Westcliff International Journal of Applied Research* is to create a platform for faculty, students, and external contributors to publish their work in any discipline. This journal brings together faculty from different industries and students who are at any level in their academic career, thereby bridging the gap between faculty, students, and other industry professionals.

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Women's Entrepreneurial Ecosystem in Nepal: A Study Based on Kathmandu Valley

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ABSTRACT

Entrepreneurship, traditionally seen as a male preserve, has witnessed increasing participation from females in recent years. Across the world, the number of enterprises being run by women is growing exponentially. Nepal is not an exception to this emerging trend. However, there are embedded structural and socio-cultural constraints which pose a challenge to the growth of women entrepreneurs and the stability of the entrepreneurial ecosystem in Nepal. Through qualitative research, this article attempts to study the phenomenon of the entrepreneurship of women and explore the status-quo and the policy framework for female entrepreneurs in Nepal. This article explores the current entrepreneurial environment for Nepalese women, as well as the issues and challenges associated with it. This study was conducted within the Kathmandu valley and samples of the study were drawn from various stakeholders comprising of financial institutions, government agencies, I/NGOs, venture capitalists and women entrepreneurs. The data required for the study was obtained via in-depth personal interviews, key informants' interviews and literature reviews from a variety of well-researched journals and articles. The six-factor model, inclusive of social, economic, competitive, facilitating, locational and political aspects identified by Bulsara, Chandwani and Gandhi (2014), has been assessed to understand the inherent challenges. Additionally, a political, economic, social, technological, environmental and legal (PESTEL) framework has been used to analyse insights from current women in the Nepalese entrepreneurial ecosystem. This study revealed that the process of lengthy documentation, bureaucratic hassles, political uncertainty, uncondusive business environments, corruption, strikes, and unionization are the concurrent factors affecting the entrepreneurial environment in Nepal. On the policy side, though an amendment has been made in the Nepal Enterprise Act to support the entrepreneurship of women, the effectiveness of the policy support is still questioned.

INTRODUCTION

Women entrepreneurship refers to the innovation, initiation and operation of any business by that of a woman (Kumar, Navalgund, Mohan, & Vijaya, 2013). Findings from Cohoon, Wadhwa and Mitchell (2011), list empowerment, self-reliance, financial stability and independence as key factors motivating females to step into the entrepreneurial journey.

Women entrepreneurship in Nepal is still in the evolving process. According to Dwibedi (2015), the surrogate entrepreneurship culture evident in Nepal makes the task of capturing the actual number of women entrepreneurs very difficult. Many women, though registered as entrepreneurs, do not operate the ventures. The enterprises they own are either run by their husbands or another male family member. Nepal still follows the feudalism of cultural norms and beliefs which prevent women from being entrepreneurs ("Green tick Nepal," 2018). The embedded structural and socio-cultural constraints have highly challenged the growth and stability of the entrepreneurial ecosystem. In many parts of the country, women are viewed as a vulnerable population and are subjected to unfair treatment which binds them to break the blockages and act on their own will ("Green tick Nepal," 2018). As per the United Nation's (2018) records, women constitute 50.4 percent of Nepal's population. Despite representing half of the country's population and being a better half of the society, female participation is relatively low in the economic sector, which is why women entrepreneurship in Nepal is yet to gain momentum.

OBJECTIVES OF THE STUDY

The general objective of this study is to understand the current entrepreneurial environment for women and the issues and

challenges associated with this sector in the context of Nepal.

The specific objectives of the study are:

i. To explore the overall entrepreneurial environment for women in Nepal.

ii. To assess the contribution of the supporting agencies like I/NGOs, financial institutions-commercial and development banks, government agencies and venture capitalists in promoting women entrepreneurship in Nepal.

METHODOLOGY

Kathmandu valley is the social, political and financial hub of the country. Kathmandu and Lalitpur metropolitan, cities which are two contiguous and closely looped administrative cities (Thapa, Murayama, & Ale, 2008), were selected for the study. Qualitative research design and the convenience sampling method was used for finding the appropriate respondents. The sampling technique as of Llorente, Lopez, & Montes (2011) was followed. Seven sample points were determined to capture the heterogeneity and diverse respondents in the study. A total of ninety-two samples were selected randomly from sample points and were further broken down as per the requirement in each district. The sample covered respondents from NGOs/INGOs, financial institutions-commercial and development banks, government offices, venture capitals, startups and private enterprises. The research design for this project can be seen below in Figure 1.

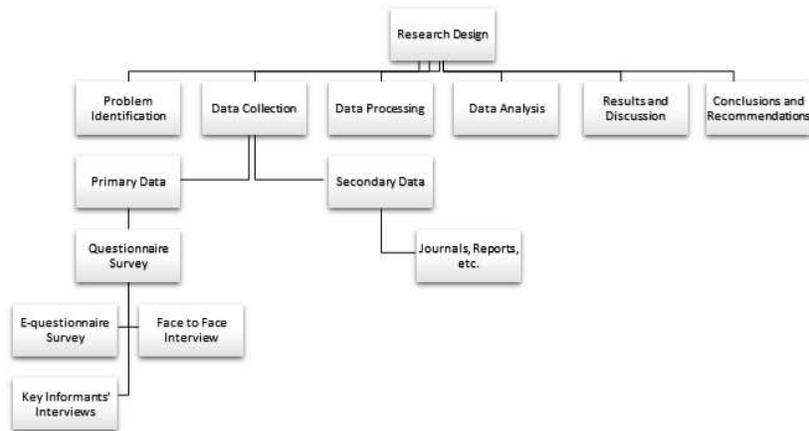


Figure 1. Research design followed for the study.

As can be seen, the primary data was collected via personal interviews, key informant interviews and mailed questionnaires. The key informants for the study were respondents from the credit departments in commercial and development banks, representatives of I/NGOs, government officers, owners of private organizations-venture capitals, law firm and colleges. Face-to-face interviews with selected entrepreneurs were also conducted to gain insights related to entrepreneurship programs and their effectiveness.

DATA ANALYSIS

Most of the data obtained was qualitative and descriptive in nature. Triangulation of ideas was carried out and the responses obtained were compared and contrasted with previous academic literature related to women entrepreneurship. The study used the phenomenological approach for the analysis of the data. The fundamental goal of the phenomenological approach is to arrive at a description of the nature of a particular phenomenon (Creswell, 2013). Under the phenomenological orientation, persons with deeper understandings of the entrepreneurial

ecosystem and experiences were identified; their experiences of entrepreneurial aspects were recorded, transcribed and interpreted. Collected data was processed and further analyzed with the help of Microsoft Excel 2010.

THEORETICAL FRAMEWORK

The conceptual framework, developed by Bulsara, Chandwani, and Gandhi (2014) identifies six factors that affect and challenge women entrepreneurship: social factors, economic factors, competitive factors, facilitating factors, locational mobility of entrepreneurs, and other factors. Social factors include childhood, background, education, religion, community setup and cultural issues, support from spouse/family/relatives/community, social mobility and work-life balance. Usually in Nepalese society, women have a lower societal position than men and are expected to work at home. They do not have complete support from their families to enter into the entrepreneurial world (Acharya, 2001). Male members of families do not want to invest their capital in a business run by a woman due to a lack of confidence in women's ability to run a venture successfully. Even if a woman

receives the familial support to work outside of the home, it is generally within the confines of a corporate job.

Economic factors refer to financial assistance, size of the market, and a lack of access to credit. A lack of financial support is the most common reason as to why many women are unable to start an enterprise (Sashikumar, 2017). In Nepal, women have lesser access to financial resources when compared to their male counterparts. They are not entitled to property rights which deprive them of tangible assets which can be used as a collateral for obtaining funds from external sources.

Competitive factors involve potential entrants, rivalry of firms and substitute products, and cut-throat competition. In Nepalese communities, people start their businesses as a rivalry. "If s/he can do it, I can do it too" is a common thought driving people to start businesses. According to Acharya (2001), a majority of small and medium enterprises owned by females lack prior market research and business knowledge due to which women proprietors face severe problems operating business. Lack of access to marketing networks, marketing information and appropriate business education deprive women entrepreneurs of voice and say in mainstreaming their concerns.

The facilitating factors include training, mentoring and exposure to a business environment. Networks and business associations play an important role in support,

training, information management, and access to mentors, role models, and resources (Sattar, 2010). Women entrepreneurs in Nepal are disadvantaged because formal and informal networks and business development services are largely dominated by men. Women, thus, lack exposure, inhibiting their prospects of growth and expansion. Low participation in trainings, limited access to modern management methods, technology and consulting services are pertinent challenges faced by women entrepreneurs in Nepal.

When it comes to locational mobility, unlike men, women's mobility in Nepal is highly limited due to the socio-structural constraints. Women are obliged to access resources through family and spouses. A single woman running a business is still looked upon with suspicion. The cumbersome exercise involved in the registration and operation of business compels women to give up the idea of starting their own venture and instead turn to a corporate job or domestic work. Other factors for giving up include a lack of self-confidence and risk-taking capacity, as well as male domination in the productive sector. Mainstream research, policies and programs tend to be "men streamed" and too often do not take into account the specific needs of women entrepreneurs and would-be women entrepreneurs (Acharya, 2001), thereby, limiting their substantial participation entrepreneurship. These challenges can be summarized as seen below in Figure 2.

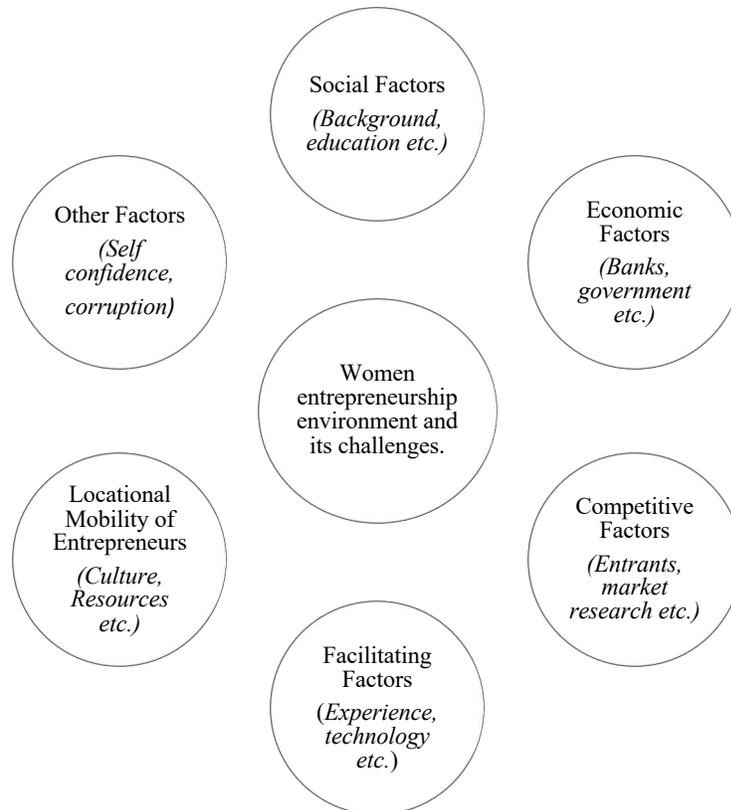


Figure 2. Theoretical framework for women entrepreneurs and challenges faced. (Bulsara, Chandwani, & Gandhi, 2014).

ENTREPRENEURSHIP IN NEPAL: HISTORY AND TRENDS

The history of entrepreneurship in Nepal dates back prior to the unification of the country. The Mallas, who ruled then, married Bhrikuti to the Tibetan emperor, Srong Btsan Sgam Po. This partnership improved the relationship between Nepal and Tibet, especially in regard to the trade of Buddhist philosophy and art. Nepal was known for its unique art and crafts. People made wooden, metal, and stone crafts that reflected the culture of Nepal and incorporated elements of Buddhism. This might have been the first entrepreneurial step in the history of Nepal (Shakya, 2008). Since then, the trend of entrepreneurship in Nepal has been on the incline. There are a variety of startups, social and commercial enterprises emerging in the market. The idea of entrepreneurship has also been integrated into the educational system,

as entrepreneurial courses. Some of the business colleges in Nepal run incubation centers, which incubate and transform the ideas of individuals into concrete business projects. These centers facilitate the growth of social and commercial entrepreneurship through academic teaching, training, mentoring, networking, and most importantly, providing access to seed capital for establishing startups. In addition to this, the emergence of venture capitals has also supported the growth and development of the entrepreneurial sector in the country.

ECO-POLITICAL SITUATION IN NEPAL

The eco-political situation in Nepal is not considered favorable for establishment of a business. This is due to the fact that the process of business registration and operational procedures is a hassle. Nepal is

ranked 110th among 190 economies in the ease of doing business, according to the latest World Bank (2018) annual ratings. The continued political disputes, complex tax regime, weak institutional capacity to enforce contracts standing, electricity standing,

construction permit etc. attributes to this lower position (“Nepal slips 5 places,” 2018).

If we compare the index of doing business presented by the World Bank, the report will help us know how friendly the economy is for the females.

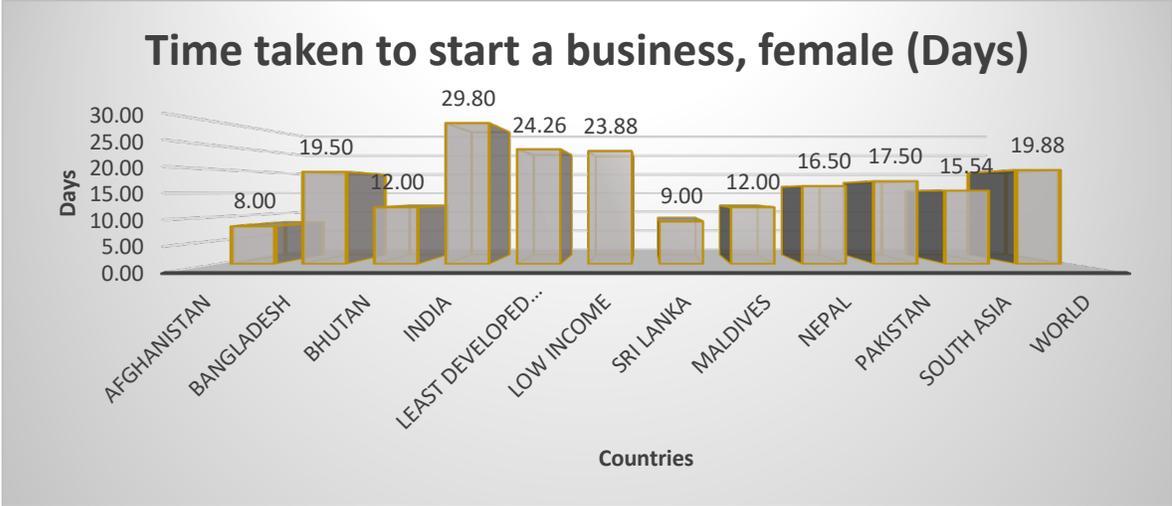


Figure 3. Time taken to start a business by female. (“The world bank in Nepal,” 2016).

The graph shows the time taken (in days) to start a business by females in the South Asian region. It also compares this to the world average. According to the graph, Nepal takes almost 17 days to start a business, which is less than the number of days shown as the average of low-income countries and the world average, but it is a larger number of days than the average of South Asia (15.54 days). Nepal thus, lies in the middle for the duration required to start a business for all South Asian countries.

Similarly, if we compare Nepal with the top five countries of the world, in terms of doing business, we can see that these countries, on average, take 2.2 days for entrepreneurs to start a business, whereas Nepal requires more than 15 days to accomplish the same feat. This implies that Nepal still needs to learn a lot from these countries regarding policy and business environment. The number of days required to start a business can be seen by country in Figure 4.



Figure 4. Number of days required to start business. (“The world bank in Nepal,” 2016).

Another constraint of doing business in Nepal is that private businesses are required to follow 130 processes from 41 different ministries (“The World Bank in Nepal,” 2016). Additionally, corruption is extremely high in Nepal. It was ranked as 130th out of 175 countries in 2015 (“Transparency international,” 2017). Bribery has become so infused within the bureaucratic system in Nepal that the pace for business registration has been impacted when there is an absence of bribes. For the reasons aforementioned, it

can be concluded that Nepal presents a difficult entrepreneurial environment.

To make a further study the entrepreneurial environment in Nepal, a PESTEL analysis was carried out which included analysis of political, economic, socio-cultural, technical and legal environments. The elements of the PESTEL analysis can be seen below in Figure 5.

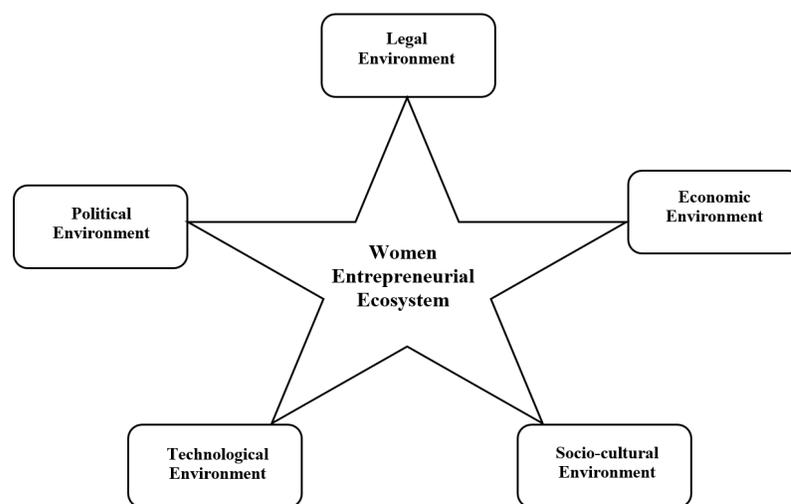


Figure 5. PESTEL framework to study the women entrepreneurial environment in Nepal.

WOMEN ENTREPRENEURIAL ECOSYSTEM ANALYSIS

Legal Environment

Different countries have different legal terms and procedures regarding entrepreneurship and the starting of a business. According to USAID's chief economist, Steve Radelet, the significant requirements for women entrepreneurs in terms of legal and regulatory frameworks differ between countries from property rights to access to finance options. Similarly, women entrepreneurs face a myriad of legal and regulatory challenges that prevent them from starting new businesses.

Nepal's constitutional and legislative framework has become more gender friendly with the intention of raising the social and economic status of women in the country. According to the Central Bureau of Statistics (CBS) (2011), female headed households have increased from 14.57 percent in 2001 to 25.73 percent in 2011.

A way Nepal has attempted to assist women is seen through the registration of land. If land is registered in the name of a woman, she would receive 20 percent off in the tax payment. After this law passed, registration of land and property in the names of women rose to 19.71 percent from 9.11 percent in the previous census (CBS, 2011). This proves that, the current law is influencing the power distribution in small but powerful ways.

According to a Nepalese law enacted in 2011, if a business is registered as solely owned by a woman, the business will receive 35 percent off of the registration fee. In addition, women can receive 20 percent discounts for patents and other intellectual property rights ("Government of Nepal," 2011). Currently, it is very difficult to estimate the actual number of women entrepreneurs in Nepal due to the absence of up-to-date data. According to the findings obtained from the financial

institutions, I/NGO's, government agencies and venture capitalists surveyed, women entrepreneurs are being supported at various levels. Financial institutions, such as commercial banks, development banks, and micro credits are providing loans, credits and other possible benefits. I/NGOs provide seed money, functional and financial literacy trainings, mentoring, counselling and leadership development skill trainings. The government provides tax rebates, concessions in the process of registration, entrepreneurship funds, reservations of seats and scholarships in technical education, etc., while venture capitalists support via mentoring, counselling and providing networking opportunities.

However, it is unclear who is actually controlling or running the businesses that have been registered in the name of women. A trend has developed for registering businesses under a woman, solely for the tax benefits. This is continuing to increase as the Nepal Enterprise Act 2016 has been passed, promoting woman entrepreneurship by offering rebates in registration, income tax, and remuneration income. Despite all the efforts of supporting agencies to empower women as entrepreneurs, the status of women has not changed as expected. According to the gender development index (GDI), socio-economic conditions for Nepalese women is very not good. Nepal ranks 134th among 156 countries in terms of the GDI ("The World Bank in Nepal," 2016).

Economic Environment

Nepal is an agrarian economy with a population of 28.51 million and a gross domestic product of 21.19 billion dollars ("The World Bank in Nepal," 2016). Development assistance, agricultural enterprises, tourism, exports of carpets and garments and the remittances of millions of Nepalese working abroad, play important role in the Nepalese

economy (Maskey, 2014). According to Simoes (2016), the top exports of Nepal are flavored water (USD92.2M), knotted carpets (USD75.7M), non-retail synthetic staple fibers yarn (USD58.4M), nutmeg (USD34.3M) and other plastic products (USD33.2M). The majority of these exports are in China, India, United Arab Emirates, United States and some European countries. In recent years, the export base to China has improved equating to 55.3 percent of the total exports, while merchandise exports to India rose by 22.6 percent (Tripathi, 2016). Additionally, outgoing migrant workers have decreased by 8.9 percent according to the department of foreign employment and thus, remittance in Nepal has also been continuously decreasing.

The liquidity management of the economy has also been challenging as financial institutions have not been able to facilitate the entrepreneurial environment. Since the exports have been slightly positive towards China, it is high time women entrepreneurs tap the opportunity and begin to produce items such as agricultural products, handicrafts, garments, which have not been made commercial or been dominated by male business society.

Political Environment

The political environment of a country plays a vital role in the growth and expansion of businesses. In a country like Nepal, where a multi-party system exists, untimely formation and dissolution of the government has ravaged the policy-making and execution of drafted policies. The Worldwide Governance Indicators ranked Nepal in the bottom 20th percentile for political stability out of 200 countries ("The World Bank in Nepal," 2016). The prevailing uncertainty in the political system has not just dampened entrepreneurial activity but has affected the macroeconomic environment. The frequent changes in government structure, policies, reforms, laws

and regulations have constrained both domestic and foreign investments, which in turn stops newcomers from entering into the entrepreneurial ecosystem.

The bureaucratic system has had a major impact on entrepreneur's lives. According to Sorensen (2006), the characteristics of bureaucratic organizations may create frustration, political disruptions and lost opportunities for individuals who are attempting to pursue new ideas. In the context of Nepal, bureaucratic hassles are one of the major concerns. The lengthy conventional documentation process and the centralized and exclusionary system where people from outside the valley have to come to Kathmandu, the capital city for business registration presents territorial hurdles within the country. The evolving bureaucratic system is dominated by bribery. Bribery has become fundamental to progressing through each step of the registration process and results in discouraging entrepreneurs and worsening situations.

Political challenges include unionization in the production process. Each political party in Nepal has its own labor union. Such unions are considered powerful by their respective governments. They pressure the government to fulfil their self-based interests by holding demonstrations, calling for strikes, locking up the industries, protesting, etc. The affiliation of labor organizations with political parties and leaders compel management to compromise with labor union demands even against the interests of an enterprise or the nation as a whole.

Socio-cultural Environment

Nepal is rich in terms of socio-cultural diversity. Despite the diversity, the patriarchal system is still dominant ("Green tick Nepal," 2018). Even though gender equality, leading to equity and equal opportunity are fundamental rights in Nepal, different standards of behavior for men and women exist. The lower

participation of women in entrepreneurship is the outcome of societal standards and beliefs which view women as homemakers rather than innovators or change makers.

In Nepal, entrepreneurship has always been a male preserve. Women's participation in meaningful business experiences are limited by various socio-cultural factors. Women face specific obstacles such as family responsibilities, restrictions on spatial mobility and limited social capital that must be overcome in order to give them access to entrepreneurial opportunities. In addition, the society in Nepal, of which the woman is an integral part, does not believe in a woman's capacity to operate a business (Acharya, 2001). Many times, a family's reluctance to invest their capital has impaired the growth of women-led ventures. When it comes to requesting loans, even the financial institutions demand the presence of a male member or the need for tangible collateral which women have little access to. This clearly displays the lack of trust the Nepalese society puts in the capability of women to run a business independently.

If we look at the positive side, the increasing number of enterprises initiated, run, and managed by women marks a transformation of the Nepalese society. "The formation of self-help groups (SHGs), support from I/NGOs, higher levels of education, and economic liberalization can be considered reasons for this change" states, Rita Bhandari, former president of Federation of Women Entrepreneurs' Association of Nepal (FWEAN). However, despite all of this support, female entrepreneurs are still far from being on par with men.

Technological Environment

Business and technology are complementary to each other. Technology advancement increases production, effective use of resources, and brings an opportunity to

upgrade business firms. Technology is not only a driving force for economic growth and entrepreneurial ventures, but it also acts as a powerful factor able to shape entrepreneurs' behaviors, values, and mindsets.

The process of entrepreneurship involves the use of technology at every step whether that be idea generation, idea selection, resource assemblage, production, marketing, customer satisfaction or any other aspect related to the development of the enterprise. In this perspective, technology is not a neutral tool but something that supports and constrains human action, thinking and even deepest values. Each technological innovation brings with it a wave of new start-ups and new entrepreneurs. Women entrepreneurs in Nepal are well-represented in small and medium enterprises that are based primarily on the subsistence level of technology and production. The growing number of women who own businesses in Nepal, is concentrated mostly in retail trade, home based operations, and personal service industries (Maskey, 2014).

Since mass scale of production is important for economic empowerment and technology is vital for the same, it is imperative to link women entrepreneurs to business development services and increase their access to relevant technical education. The primary focus of Nepalese women entrepreneurs has to be shifted from the traditional sector of small and micro enterprises to larger sectors of technology and innovation. The use of the latest digital technology, to disrupt old ways of doing business, is the need of the hour. Therefore, the usage of computers and the internet and light semi-automated machineries must be promoted to increase the utility and production among the women entrepreneurs.

CONCLUSIONS

The entrepreneurial environment for women in Nepal is full of challenges. It is improving but at a snail's pace. The political uncertainty, corruption, strikes, bureaucracy, and unionization have greatly affected the entrepreneurial environment. The process of starting a new business is long and tedious. Not only do the political factors affect this, but also factors like societal, legal, economic imbalances have greatly affected the current situation for women who wish to enter into entrepreneurial positions. In addition, the society of Nepal views women as homemakers rather than as innovators or change makers. Some people even find the word, "women entrepreneurship" to be feminist and refuse to use it. Whereas some, who are genuinely trying to help, complain that women do not even try to seek out possible help due to inadequate market information or networks.

The civil society organization is working together with I/NGOs, like the United Nations, to decrease the gender gap by setting quotas for women to participate in professional development functions. The I/NGOs also help in training, providing networking opportunities, and giving options for financial aid to women entrepreneurs. The legal environment is trying to help women entrepreneurs to uplift their status through power distribution, living styles, and working environments. But, it is unclear who is actually utilizing those services and how many are benefiting from it.

Additionally, legal policies try to encourage women entrepreneurs, but according to the new Industrial Act of 2011, we can see the

industry is employing more than 50 percent of women, socially excluded and those who are disabled to receive a 15 percent tax discount. Instead of promoting women entrepreneurs, the legal policies seem to rip them off by further adding documentation that is unnecessary and hard to come by and by not supporting them in ways that make a difference. Furthermore, the political environment of a country plays a vital role in the growth and expansion of businesses in any economy. Having an unstable political system will not just dampen entrepreneurial activity but will also affect the macroeconomic environment as a result. In Nepal, it has constrained both domestic and foreign investment, which has also stopped newcomers from entering into the entrepreneurial ecosystem.

Nepali women have to be seen as more than homemakers and need to be given equal rights (in practice) as suggested by the constitution of Nepal to establish and flourish their businesses. Only when the policies are made people-friendly, can more women be encouraged to join the entrepreneurial ecosystem. Current social norms must be changed. Regarding the policy amendments, the entrepreneurial and economic policies of countries like New Zealand, Hong Kong need to be studied and compared and contrasted with the Nepali policies, wherein the legal hurdles can be overcome. As Nepal's federal government stabilizes as grows, the political stability will further boost the entrepreneurial ecosystem in the country, providing women with more opportunities to enter into it.

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Leading the Change with Six Images of a Change Leader

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ABSTRACT

Change is constant, and it is a continuous norm. It has even been said that, “to refuse to change is to be left behind” (anonymous). While difficult, this is still something that both individuals and organizations must cope with. The world is constantly changing, which explains why individuals and organizations that are open to change continue to survive. Many researchers have argued that an organization may only achieve a successful change when there is effective leadership. Effective leaders are those who understand when to change and how much to change. The purpose of this paper is to reiterate the importance of leadership in implementing a successful and transformational change in an organization. It will further explore a body of literature that supports and identifies roles leaders take on in the change management process.

INTRODUCTION

Today, organizations are constantly changing in their strategies, processes and procedures in response to the dynamism of business. Organizations are faced with internal and external environmental pressures, and in response to these pressures, they have to constantly change. Johansson and Heide (2008), explain that change is often driven by conditions in the surrounding environment and also triggered by needs within organizations. Elias and Mittal (2011), assert that virtually every organization will go through development and change at some point. While change revolves around both the organization and the employees, the employees are the main actors of change. Therefore, change is about the people in an organization. However, to lead these people, a change leader whose role is to act as the catalyst in the change process is essential. A change manager provides a structured approach to help people transition from a current state to a future state, as a result of change (Hoe, 2017).

More importantly, change cannot exist in a vacuum as it occurs between the organization and the people of the organization. Therefore, a successful change can be determined by identifying if the people were an integral part of the change process and throughout the process were building relationships and depending on team work. The personal leadership style of a change leader is the key to a transformational change taking place. Leaders must have confidence in themselves and their abilities so that those who look up to them as leaders will have confidence in them as well.

Hoogendoorn, Jonker, Schut and Treur (2007), explain that the need for a change may be prompted by an environment or by an organization. This paper analyses in detail why change is a survival strategy in today's business

world, especially in the face of fierce competition. The methods used in this analysis are those of formalization, simulation, and verification. An analysis of the six images of a change manager in the pursuit of successful transformational changes will be included. Additionally, characteristics of leaders such as transparency, openness, trustworthiness, and honesty are found to be essential to achieve a desired change, and due to this, will be explored.

THE SIX IMAGES OF A CHANGE MANAGER

Palmer, Dunford, and Buchanan (2016), identified the six images of a change manager as a director, interpreter, navigator, coach, caretaker and nurturer. A change leader must exhibit all six of these roles, which are not separate categories. Instead, they form two continua, from controlling to shaping management roles and implement outcomes that vary from planned to unintended. The boundaries of these six images are blurred, and their elements may overlap in practice (Palmer, Dunford, & Buchanan, 2016). Although one or more of the six images may be more pronounced than the others, a transformational change leader is able to balance the mix.

In the role of a director, a change manager gives direction towards the expected outcome spelling out how the change would be achieved and providing the necessary resources required for the change. This image makes the change leader the grand commander in the change process. The one who designs the tactics and strategies that need to be adopted in order to achieve the desired result. The director maneuvers, manipulates, manages and monitors the teams' activities in the direction of the desired change (Palmer, Dunford, & Buchanan, 2016). It is important for a change manager never to base actions on assumptions in the process of change. There

must be a clear vision as well as a defined mission of what is to be achieved. This will guide the change. There must also be an understanding of what needs to change and the direction of the change in order for the leader to guide and control the activities of the team members appropriately.

The interpreter image requires more of a 'sense-making' approach involving 'sense breaking' and 'sense giving' to the situation. This simply means that the change must make sense to the people who will enact the change. In order to achieve this, a change leader must clearly communicate the purpose of the change in a manner that is easily understood by other team members. A change manager must know that everyone may not move at the same, thus, an assessment of the level of support from the team is necessary. Once a specified percentage of support is achieved, the late adopters will eventually catch up with the change (Palmer, Dunford, & Buchanan, 2016). Whatever happens, it is the duty of change managers to offer interpretations of the change where they make sense to the people involved. In the opinion of Rouleau and Balogun (2010), sense-making is a social process of construction and reconstruction through which managers understand, interpret, and create sense for themselves and others of their changing organizational context and surroundings.

The image of a change manager as a coach is important because the actions or inactions of a leader can lead to a change that cannot be sustained or that may fail outright. Change can fail if the people enacting the change feel demotivated, if the vision is distorted, if people do not buy into the change, if there are dishonest leaders, or if organization politics and power are perceived. People tend to resist change either actively or passively, although, it is mostly passive as they would not want to be seen as opposing the organization or change

outright (Palmer, Dunford, & Buchanan, 2016). People will however actively resist change when it is perceived as likely to cause discomfort or is perceived as a threat. Lack of communication, perception of wrong timing for the change, lack of clarity, a negative legacy of past experiences, unclear advantages, dislike for change, strong attachment to status quo or organization culture, and a lack of or low tolerance for uncertainties are some of the reasons people resist change (Palmer, Dunford, & Buchanan, 2016). As a navigator, a change leader must be able to manage through resistance, addressing the concerns of the team members while making them focus on the overall outcome which the change process aims to achieve. Change leaders must ensure that they always communicate effectively during the process of change management, perpetually assessing people's support of the change and projecting the change without threat in order to minimize resistance. Resistance to change can be managed using a contingency approach, although there is no specific best way of managing change (Urquhart & Allison, 2014). A change manager needs to understand that change must take its natural course, and as such, people are bound to deny, resist, explore and finally commit to the new course. This is what Kubler-Ross (1969) identifies as the coping cycle is later described as the classic change curve (Schneider & Goldwasser, 1998).

The change curve is a change management design model that describes the path the people and the organization follow in order to achieve the change result. It is a model that describes the four phases that people go through as they adjust to change. The phases are known as the introduction phase, the disruption phase (also known as the despair, resistance or apathy phase), the decision phase (also known as the make or break point) and lastly, the phase of embracing and

committing to the change. It is worthy to note that although the phases are predictable, strong leadership is needed to know what to do at the point of resistance, despair or apathy. The role of a nurturer on behalf of the leader is necessary in order to achieve stability (Palmer, Dunford & Buchanan, 2016).

Throughout the process of change, each situation will be different, and as such, a leader must determine the best approach as they progress (Burnes, 1996). This is where the role of the change leader as the caretaker comes into play. In this role, the leader must first ensure that resources are available in terms of capital and intellectual ability. Next, they must ensure process continuity such that no one's absence can halt or disrupt the process. The third step is to shape the process while understanding the direction of change in order to identify promptly when there may be some form of derailment. If this occurs, a change leader must develop an adequate plan to put things back on track. Lastly, a caretaker is to welcome constructive criticism. The failure of a change does not always indicate failure, but rather it serves as a learning tool to identify other better ways of achieving the desired result (Palmer, Dunford, & Buchanan, 2016).

There are identified change management competencies required for effective leadership. The Change Management Institute (CMI, 2012) proposed a competency model which encompasses all the areas that require the attention of a change manager. The model identifies twelve skill areas of a transformational change leader and emphasizes a more strategic perspective of the change manager's ability to understand the environment, the stakeholders, and the sustainable outcomes.

Other inherent factors that may affect sustainable change and which a change manager must be mindful of are organizational culture, politics and power. If an organization's

culture does not embrace change, a change manager will have to utilize more energy and resources in order to achieve buy-in. A change manager cannot be ignorant or neglect organizational politics. Instead of pretending that they do not exist, a change manager must engage in order to gain the desired political support necessary to achieve the change. In the opinion of Buchanan, Claydon, and Doyle (1999), organization politics play a major role in change implementation and this is why it must not be ignored, but rather managed in a change process. A change manager must know that some individuals are powerful in the organization. These individuals can either make or break a change program, and as such, change managers must strive to gain the buy-in of such people in the organization. In the opinion of Mark and Wim (2008), the success of strategic change will depend not only on an organization's ability to implement new structures and processes, but also on the organization's ability to convey the new mission and priorities to its many stakeholders. In other words, communication is key in achieving successful organizational change.

CONCLUSIONS

The practical implication of analysis done in this paper is to identify the strategic roles that leaders play in the change management process while contributing to the body of literature regarding the strategic change management process. It is very important that change managers understand the change management process itself, the changes by understanding the vision, and the need for change. They can then create a shared understanding of the change with their team through effective and honest communication, a well-defined strategy and properly mapped out plans for the change. A change manager must know that change can fail and must be

prepared for unplanned or unprecedented outcomes.

The further implication of this paper is the need for a strategic approach to managing change because change itself is a risky venture characterized by so many uncertainties. A change leader must be prepared to navigate through the process, weathering the storm until normalcy and the desired results are achieved. The likelihood of unintended

outcomes is one of the major reasons why people tend to resist change. Unfortunately, change is inevitable but resistance to change is not inevitable. Therefore, change leaders must ensure to communicate effectively during the change management process, assessing people's support of the change and projecting the change without threat in order to minimize resistance.

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The Historical Retrospect of an Overlooked Business Opportunity Within the Aerospace Sector

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ABSTRACT

The aerospace sector is a dynamic, highly technology-driven industry with a remarkable societal impact. Partially fueled by air transportation and space exploration, the United States aerospace and defense industry generated 143 billion worth in exports in 2017. In light of conventional marketing and management practices pertaining to product development, traditional, non-adaptive product life-cycle management often falls short in this industry, explicitly under circumstances when the customer experience is neglected on a holistic level. Notably, such an approach could indeed result in overlooked business opportunities and strategic planning inconsistencies. In this paper, a specific overlooked aerospace business opportunity is dissected with objectives to depict the potential existence of secondary markets and to suggest a holistic approach to product life-cycle management.

INTRODUCTION

Product development and market penetration signify convoluted tasks in the aerospace industry. The defense-related nature of the aerospace sector inherently results in the fact that product development no longer remains a purely technology-driven process. In fact, the introduction of new aerospace products in the United States, a global leader of this industry, is commonly done with a variety of legislative facets (Department of State, 2012). One of these sets of regulatory regimes, entitled, International Traffic in Arms Regulations (ITAR), restricts and controls the export of defense and military-related technologies to safeguard U.S. national security and further U.S. foreign policy objectives. Thus, since there is an increasing level of competition between nations who aspire for global aerospace dominance, safeguarding technologies is a rather common practice.

With the legislative nature of the aerospace industry in mind, a short historical study about product development with regards to air transportation is fruitful as a starting point. In the early days of flight, the mere objective was to design a flight-capable, aerial vehicle. Balloons and gliders preceded powered aircraft which essentially had the distinct goal of transporting passengers and cargo from point A to point B (Gohardani, 2011). Over time, more efficient ways of transportation were adopted by the industry as progress in aircraft design including aircraft propulsion took place. Piston engines were replaced by gas turbines and the shape of the aircraft fuselage was modified based on the intended flight regime and operational requirements (Gohardani, 2013). Throughout the years, powered aircraft perpetually found new applications, and today, many are familiar with the concept of unmanned aerial vehicles

(UAVs), more commonly known to the general public as drones.

Despite the false perception that the concept of drones is new, this is not the case at all. In fact, onboard pilotless aircraft were the ideas of individuals like George Cayley, referred to as the father of aviation, and Felix Du Temple, the developer of one of the early powered model planes. With other visionaries like Nikola Tesla, designer and inventor of the radio remote control vehicle torpedo, weighing in, these concepts progressively evolved from simple ideas to functional aerial torpedoes and drones (Gohardani, 2018a).

In subsequent sections, additional insight is provided into UAVs, product development in other industries, and an overlooked business opportunity within the aerospace sector.

UNMANNED AERIAL VEHICLE TECHNOLOGIES: DRONE TECHNOLOGIES

Drones have taken the aerospace sector by storm (Juniper, 2018; Parks & Kaplan, 2017; Custers, 2016). Today, drones are frequently used in support of educational efforts, search and rescue, public safety, and monitoring. Herein, one needs to distinguish between drones operated by the general public (Juniper, 2018) and devices exclusively operated by members of the armed forces for military applications (Parks & Kaplan, 2017). In the latter case, there are often distinct guidelines and regulatory frameworks set in place for drone use. Nonetheless, the drone operational regime for the general public has been a different story entirely.

With countless numbers of drone applications and the choice of toy manufacturers to streamline the usage of drones, the regulatory framework for drone usage and operation (Custers, 2016) reluctantly fell behind the product to market penetration points. Moreover, as an abundant number of cases are constantly reported in

which the drone operations result in the invasion of privacy, and at times, prevent first-responders from performing their duties (Urness, 2018), the legislative puzzle pieces for prevention of such behaviors are continuously falling into place. One direct measure by the Federal Aviation Administration (FAA) to target the aforementioned shortcomings has been to request that drone operators register their drones. Hitherto more than a million U.S. drone users are recorded in the FAA drone register (Gohardani, 2018c).

**ANTI-UNMANNED AERIAL VEHICLE TECHNOLOGIES:
ANTI-DRONE TECHNOLOGIES**

The drone boom and operational inconsistencies amongst different operators have led to the development of a series of anti-drone technologies (Atherton, 2016a; Atherton, 2016b; Atherton, 2016c). An anti-drone technology essentially refers to a type of technology that can bring down a flying drone or a drone hovering in the sky. For these specific purposes, many different technologies have been suggested and many others are currently being explored. Consider, for example, a technology where bazookas and rifles deploy nets midair and prevent drone rotors from functioning as originally planned, hence, leading to the downfall of the drone from the sky. Another promising anti-drone concept is the usage of laser beams to freeze a drone midair and safely bringing it down. Anti-drone startups and entities are currently developing technologies to protect airports, stadiums, prisons, corporates, and high net worth individuals who are increasingly worried about their privacy and safety (Gohardani, 2018a; Levick, 2018). In short, anti-drone systems and technologies are specifically designed to counter unwarranted intrusions of drones (Gohardani, 2018a).

AN OVERLOOKED BUSINESS OPPORTUNITY

In hindsight, it can readily be established that the anti-drone market was indeed an overlooked business opportunity of the aerospace sector. Although this market is being shaped on an ongoing basis and solely features the infancy of its technologies, the anti-drone market is still estimated to reach a billion dollars within the next decade (Gohardani, 2018a). Within this framework, a valid question to ask is, was it ever possible to predict the dawn of the anti-drone market? In short, the answer to this question is yes. However, in order to shed more light on the process of arriving at this answer, two different approaches are suggested. These approaches serve as historical lessons to widen the horizons for future business cases in which adjacent technologies and emerging markets are considered. It should be emphasized that combining these two approaches would have led to a compelling argument and a solid business case for the exploration of a potential emerging anti-drone market.

**APPROACH 1: LESSONS LEARNED FROM OTHER
DISCIPLINES**

Comprehensive reviews of different disciplines and estimations of hypothetical technical impacts on society enable new paths for innovation. These relationships are often cause and effect. With the answer key in hand, the argument is in essence that a series of privacy and safety concerns could have been predicted with the rapid emergence of drones in remarkable volumes. If at least a different area unrelated to drones is considered, navigation to the answer becomes even more apparent.

Consider the waste management industry as an example. Waste management refers to all the activities and actions required to manage waste from its inception to its final disposal (UNSD, 2018). An industry and market

created as a consequence of waste in all forms, whether industrial, biological, household, or those cases where the waste poses a threat to human health, the waste management industry engages in holistic thinking about the life-cycle of products. Even though, product usage undoubtedly has a significant effect on such a cycle, historically, this type of thinking has not always been advocated. In an exemplary case, the shipping industry, one of the global polluters, has operated its ships with business as usual until recently when the International Maritime Organization (IMO) finally ruled for an implementation of the reduction of sulfuric content in shipping fuel (Rathi, 2017). Although the shipping industry only produces 3% of carbon-dioxide emission, it equally produces 13% of nitrogen, 15% of sulfur, and 11% of particulate emissions. This elucidated case reveals that at times normal technology operations lead to unwanted consequences. In the case of drone usage, the drone application itself in combination with pending legislation on drone operation and usage in addition to negligence by operators, are contributing factors to privacy and safety concerns.

Privacy and security concerns have also emerged with cell phones and smartphones and are still a topic of interest to privacy and security advocates (Agrawal, Gans, & Goldfarb, 2018). Once again, cell phone usage can bear an impact on safety and privacy. Lessons learned from the communication industry could also have paved the path for a better understanding of how non-regulated access to drones would result in the anti-drone market.

APPROACH 2: EXAMINING PRODUCT SUCCESSION

In marketing, the product life cycle at different stages is well-known. This cycle typically includes four stages: introduction, growth, maturity or stabilization, and decline

(Anderson & Zeithaml, 1984). With the objective, amongst others, to reduce environmental impacts at the end-of-life, the invisible bridge to an aftermarket could become visible if the variety of internal markets to be served had been recognized in the implementation of the new technology, as suggested by Leonard-Barton and Kraus (1985). With the new drone technology for the general public, technological forecasting (Quinn, 1967) would also assist in the identification of adjacent subject areas. Furthermore, if the various stages through which a product is designed would be considered in profound detail, branches to new markets could also have been identified.

Two of the contributing factors leading to overlooked business opportunities in the aerospace sector are incorrect usage of market research (Reinartz, 2012) and challenges of executing state-of-the-art programs (Gohardani, 2018a; Gohardani, 2018b). Nonetheless, if opportunities such as the anti-drone market had been identified by the leading actors of the drone market, these companies and entities would have had a unique opportunity to develop anti-drone technologies in concurrence with developing the drone technologies originally. Such a strategic approach would possibly have enabled these actors and entities to capture a larger portion of the anti-drone market share as it was developing. Other advantages associated with this strategic approach would have been that the early developers of anti-drone technology could have gotten a head start on a variety of technologies and possibly leverage the information gained from the continuously developing drone technology for the anti-drone industry.

An emerging field that targets cross-disciplinary topics is denoted as science, technology, and society (STS). Recently, STS (Kumar & Chubin, 2000; Bauchspies, Croissant

& Restivo, 2005; Williams, 2017) has gained momentum. STS is particularly useful when a need for observation of a chosen topic from multilateral perspectives is identified (Gohardani & Gohardani, 2016; Gohardani, 2018a). For instance, glancing at the drone industry through STS lenses would, at a minimum, have identified the impact of drones on society. With that level of comprehension, which also encompasses other subject areas such as economics, safety, privacy, and legislation, a baseline for an emerging market such as the anti-drone market possibly could have been established.

For clarification purposes, it should be emphasized that aerospace companies and entities linked to the aerospace sector, still have opportunities to gain market share and capitalize on the anti-drone industry. The missed business opportunity described in this article specifically refers to the missed opportunity by originating drone technology companies and entities which overlooked the emerging anti-drone market and its business potential.

CONCLUSION

In this paper, the anti-drone market has been identified as a missed business

opportunity within the aerospace sector. This market is estimated to reach a billion dollars within the next decade and is becoming increasingly relevant on a daily basis (Gohardani, 2018b). With objectives to prevent the unwarranted intrusion of drones, companies and entities in the anti-drone industry have embarked on a quest to develop technologies with aims to protect airports, stadiums, prisons, corporates, and high net worth individuals who are increasingly worried about their privacy and safety. In hindsight of this missed business opportunity, solely two different approaches, communicated as historical lessons, have been suggested for identification of emerging technology markets. These approaches are by no means all-encompassing but serve as navigational guides for approaching emerging markets and pave the path for holistic product lifecycle thinking.

DISCLAIMER

Any opinions, findings, and conclusions expressed in this journal article are exclusively those of the author only and do not necessarily reflect the views of any organization(s) or entities affiliated with the author.

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Adult Learning and the Advantages of the Online Learning Experience

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ABSTRACT

This paper discusses several benefits of the online educational experience, specifically as it pertains to the adult learner. The paper focuses on the aspects of collaboration, flexibility, and cultural opportunities. The work concludes that online education is ideal for adult learners because of the aspects of collaboration, flexibility, and diversity it provides utilizing the constructivist approach.

INTRODUCTION

Although criticized by some, online education offers several advantages in today's world. In fact, online education is a preferred method of many students, including the adult learner. In some cases, this type of learning can prove to be even more beneficial than more traditional methods (Luscinski, 2017). Online education has been studied now for many years. White and Weight (2000) point out that there is a connection between online education and the dynamics of human communication. As such, it offers advantages beyond those associated with technological forms of correspondence courses and interactive television programs, which were some of the beginning forms of non-classroom education. Adult learners, looking for an education, seem especially likely to thrive in the online environment because they require specific elements in order to benefit from the education process. For instance, adult learners may be more attracted to courses that permit freedom with respect to their daily schedules, especially when considering family and careers.

ADULT LEARNERS AS COLLABORATIVE PARTNERS

Adult learners introduce a different dynamic to learning in that they bring a wealth of knowledge to the classroom that can enrich the course content (White & Weight, 2000). Both personal and professional experiences add to an adult learner's ability to see things from different perspectives, as well as create alternative solutions and implement critical thinking approaches to solve problems. However, factors such as ineffective planning skills and poor time management can contribute to failure in an online program (Wright, 2015). However, some factors align very well with online programs. As Rudestam and Schoenholtz-Read (2002) described, work experience and prior knowledge play

important roles in the learning experiences of adults. Additionally, Wright (2015) found that offering a pre-orientation workshop helped to contribute to adult online learners' success. Online learning is reinforced with ever-improving technology that lends to a collaborative learning environment. Also, an online environment may exceed that of the traditional classroom to the extent that it is a *round the clock* environment, permitting students to connect to the learning process at any time (Hiltz, 1997).

Additionally, the passiveness of the traditional educational process (e.g., lecture presentations) does not serve to capitalize on the knowledge of the adult learner, nor does it offer other elements adults prefer. For instance, adult learners may desire to be educational partners. Knowing that there are benefits associated with participation, reciprocity, and a sense of belonging, may contribute to online participation among adult learners (Diep et al., 2016). The online environment offers the adult learner the ability to work as collaborative partners in the learning process due to the nature of the online discussions and sharing of assignments (Rudestam & Schoenholtz-Read, 2002). Having access to the discussions and assignments 24/7 allows the adult learners to contribute ideas dependent on their own schedules and when it is convenient for them.

Adult learning theory differs markedly from pedagogy (Knowles, Holton, & Swanson, 1998). Although online instructors direct learning as offered in the pedagogy model, the adult learning theory places learners in positions to direct learning as well. Allowing for direct learning refers to devising a learning atmosphere where learners address topical issues pertaining to their experiences and workplace, as well as providing an opportunity for them to play a role in open course discussions.

Adult learning theory finds its roots in andragogy (Knowles et al., 1998). Andragogy provides six principles for adult learning theory including: learners' need to know why they are learning; learners use self-directed learning; learners learn based on experiences; learners have a readiness to learn; learners have an orientation to learn; and learners have a high motivation to learn (Ota et al., 2006). As suggested by Knowles et al. (1998) and Cherne (2002), adult learners can direct their own learning, have life experiences that can be used in the classroom, and look to apply the knowledge learned to their current world, which seems to connect to the six principles of adult learning theory. Soundly designed online courses lend to this type of learning with materials delivered in an asynchronous fashion, permitting learners the opportunity to complete assignments relating their experiences to theory and doing so according to their schedules.

CONSTRUCTIVIST APPROACH

The constructivist approach to learning is based on the idea that learners create knowledge through interactions with others (Bruner, 1996). The constructivist approach is an oppositional stance to the traditional approach where the student takes a passive role in learning (Markel, 1999). The constructivist theory varies from traditional theories in that it shifts from memorization to implementation. With the constructivist approach to learning, the instructor takes on the role as facilitator, directing discussions and providing general parameters for the course. As Carr-Chellman and Duchastel (2000) explained the:

traditional delivery of instruction receives much less attention in online courses than in the traditional context of higher education...we are moving, here, toward a more student-centered and activity-based learning environment design. (para. 8)

Lovejoy (2002) supports this notion by indicating that adult learners have both individual and group roles in the online environment. Student-centered learning and the constructivist approach take precedent in the online learning environment. Online classrooms often compliment student-centered learning in that they provide a "medium in which the self is readily constructed in diverse ways and in which students readily form different opinions and interpretations regarding the same reading material and commentaries" (Rudestam & Schoenholtz-Read, 2002, p. 16). In addition, the constructivist approach fits well with the paradigm of online learning, whereby knowledge is something that is actively constructed and not just something that can be found in lectures, books, and traditional aspects of higher education (Rudestam & Schoenholtz-Read, 2002, p. 18). Formerly prescribed methods of instruction such as formal lectures and memorization of materials, while used sparingly in the online classroom, are merely a spring board for the conversations and assignments, such as Socratic questions, in-depth discussions, and case analyses that follow and serve to direct the course and build student learning.

From the perspective of collaboration and team work in an online setting, the constructivist theory promotes more dialogue amongst students as each student is perpetually asked to discuss his/her understanding and then compare that understanding to his/her peers. This differs from traditional learning environments where students are often asked to merely regurgitate information. Furthermore, team discussions are much more likely to spark ideas and allow students to learn new concepts and theories in relation to their experiences as well as the experiences of their peers, thus continuing to facilitate the constructivist view of learning.

Collaboration within a constructivist model supports a learning community where there is ongoing dialogue for the adult learner to enhance individual learning and the sharing of knowledge. Nonaka and Takeuchi (1995) explain that the “value of any one person’s contribution is determined less by his or her location in the organizational hierarchy than by the importance of the information she or he provides to the entire knowledge-creating system” (p. 151). In an online classroom, embracing the constructivist approach, this perspective is pivotal to adult learning because the student is working within a system to build knowledge and understanding of the concepts. In addition, an online classroom creates situations where students can take what they learn back to their respective work organizations. There is a strong aspect of real-world application throughout these courses, which has a direct impact on society.

In reality, a good online class strives to create an environment of collaboration by not only requiring weekly discussion questions but also by having students share assignments, reflect on the work of their peers, and their own experiences. Much of this is done through the incorporation of teamwork. Teamwork is a key element to adult education because “much of the work in larger organizations is now done in work groups or teams” (Bolman & Deal, 1997, p. 81). Creating teams to work towards the accomplishment of a common goal is important “because they provide a shared context where individuals can interact with each other and engage in the constant dialogue on which effective reflection depends” (Nonaka, 1998, p. 44). Thus, online learning helps to better prepare the adult learner for today’s work world.

FLEXIBILITY AND ADULT EDUCATION

Generally, adults looking for educational opportunities tend to be busy individuals with

their careers, families, and volunteer activities (Rudestam & Schoenholtz-Read, 2002; White & Weight, 2000). Because of adults’ busy lives, the postmodern business world has presented a need for many working adults to expand their education. As Hannay and Newvine (2006) suggest, adults may choose non-traditional models because they are associated with programs that “provide access to higher education for students who cannot attend traditional courses due to employment, marital status, family responsibilities, distance, and expenses incurred with traditional education” (para. 1). This diversity ultimately contributes to a rich learning environment. Ko and Rossen (2001) added that a benefit of online education is that “it opens the student to more information from all involved in the class. When students are limited to the information the instructor provides, it reduces the courses breadth and scope” (p. 105). The lack of social and demographic boundaries in online education make the learning not only more flexible, but multi-dimensional.

ADULTS FROM VARIOUS LOCATIONS

Online education provides an opportunity for learners from various regions throughout the world to come together to obtain an education. The ability to interact with peers has been identified as an important component in the online learning experience (Lucey, 2018). The online, asynchronous mode of learning means that a person living in a remote North American town, a person in Alaska, and a person on a military base in Bosnia can all obtain the same education from the same program. This opportunity not only means that education is available to more people, but that classes can now provide individuals with the opportunity to experience a diversity of thought. As many organizations move towards global operations (Shafritz & Ott, 1996), the online form of education serves

yet another purpose by helping the adult to learn to work with diverse individuals. Such opportunities are rarely provided by traditional classroom learning experiences.

CONCLUSIONS

Online, asynchronous education lends itself to adult learning in that the teacher can facilitate learning and offer collaborative, flexible, diverse opportunities for the students. The online classroom also allows for more in-depth discussions, which students can direct with the guidance of their online facilitator. Being able to go to class anytime and anywhere presents adult learners with the advantage of being able to hold a job, maintain a family, and enjoy other activities all while gaining a

valuable education. Finally, the online mode of learning serves to capitalize on collaboration and team work. This is an important aspect for working adults today in that many organizations are now moving towards team-based projects and programs in the workplace. Online education provides a viable alternative to the adult learner searching to further his/her knowledge base and educational credentials.

Although online education is continually changing and developing, it may be a viable option for many adult learners. More research needs to be done in this field in order to fully understand the impact that online education can have on an adult population.

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Decision Maker's Tool: Statistics, the Problem Solver

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ABSTRACT

The primary objective of every investor is to see how his money grows. No matter where one decides to plant or invest his money, there is an inevitable process that follows. The important thing is to closely monitor events and record every detail of information. Unless there is a proper system, issues will build and may become difficult to manage. This is the main reason why there are tools which are necessary to use when planting the seeds for investments. These tools are packed into one parcel and referred to as statistics. The term statistics will refer to descriptive and inferential statistics, probability, parametric and non-parametric tests, time series, and business intelligence. This paper will define statistical gears which are normally used by business managers to gather and analyze data for planning and decision-making. It will further highlight how the elements of statistics can build a strong pillar to run a business and alleviate potential challenges through the use of a tool known as the problem solver.

INTRODUCTION

Problems are a part of running a business. Companies must meet a target return of investment while dealing with daily operational issues and even some unexpected problems or hitches. Becoming seamlessly problem-free is what everyone is after, but it seems impossible to achieve. This is where the problem solver comes into play. To make the goals of a company attainable and achievable, the problem solver, statistics, is essential.

STATISTICS

In business, problem-solving and making decisions are daily encounters for management teams. Each day, these teams deal with the quantitative analysis of a large amount of data. In order to handle this data, knowledge about statistics is crucial. Statistics includes an understanding of the population under study as well as an analysis and generalization of the information given (Skinner, Patel, Thomas, & Miller, 2011). Statistics are needed to aid operational activities and solve identified issues.

There are two types of statistics, one is descriptive, and the other is inferential. The former applies numerical measures or graphical methods to organize data and information and describes the types of the sample taken (Marshall & Jonker, 2010). Since descriptive statistics create a systematic presentation of data and figures, it becomes an easy way for managers to comprehend the given information. Inferential statistics provides a generalization about the population from which random samples are drawn (Van, 2001). The meaning behind the figures is then explained. The decision maker can then formulate conclusions from the given summary of the systematic events analyzed.

When dealing with problems and proofs, the basis must be the common denominator for why a certain decision is made. A reliable

manager must be someone who develops his opinion, based on the data analyzed, not simply depending on his viewpoint alone. According to Kutschera (2002), for many people, their prior experiences become a major determinant for how they make decisions. This is not recommended, specifically in a world of figures, where money is involved. The trend of the previous success in business must first be gathered and analyzed prior to making a decision about the next move to take.

Confidence is developed through competence. Competence is acquired through gathering information, knowledge and experience. Competent leaders are not weak or easily intimidated but are powerful when they display an attribute of expertise in the subject of their role (Ramba, 2013). In the United States, one of the leading causes as to why small companies fail is due to incompetent leaders (Valdiserri, 2010). Competence on the part of the decision maker is achieved when a series of supporting data is available. Unless proofs are ready to be evaluated, examined and analyzed, there is no assurance that a particular decision is correct or proper. Therefore, a leader must continue to use the problem solver tool, in order to build competency and confidence. Using this, a leader will be able to manage his entire team well and handle issues logically.

On the other hand, if a leader is neglectful of his duties, specifically regarding finding ways of gathering data or analyzing information, the business will most likely fail. Failed businesses impact the GDP of a country. Headd (2003), explains that 90% of small businesses fail during the first three years of their operation in the United States. When a leader is overwhelmed by the pressure of handling problems, does not conduct a thorough study of the market and sales trends, or is not able to handle the performance and

scheduling of delivering goods and services, the nine over ten ratios will surely become applicable.

PROBABILITY

Probability is a major player in statistics (Gerhan, 2001). Uncertainties are everywhere, which is not a good thing for business managers. According to Burgin (2012), probability is associated with risk in the area of business. Risk management, as defined by Cross (1995), is the implementation of concepts which are applied and used by other entrepreneurs who succeeded in their business ventures. However, risk management should not only identify a pattern from previous gains, it must also incorporate the application of acquired knowledge.

Generally, in business, the probability of success rates is lower than the rates of failure. A majority of leaders will predict that they will always be able to hit their targets, but this is not usually the scenario. In this particular case, a knowledge of statistics could support the decision-making process by allowing leaders to evaluate uncertainties based on numerical values. The insurance field is an example of the type of industry which handles big data. Different sections within the industry each deal with various policies and issues. Without the application of probability, there would be no system or direction. Plans are generally created based on assumptions, essentially predicting an upcoming condition which has no guarantee (Gitlow, 2001). Businesses can side step this risk of planning with no certainty by basing predictions on the analysis of data prior to developing a plan.

In statistics, parametric and non-parametric tests are essential tools used to analyze the given data. Cohen (2001), explained that a parametric test pertains to the analysis of variance, while a non-parametric test is a ranking test. The former deals with the

study of given data with known values for distribution. On the other hand, the non-parametric test is not dependent on its analysis through the sample data, but instead depends on the ordinal, position, and levels determined.

The use of a survey is one way to perform parametric and non-parametric tests. From 2003 until 2015, the investment activity of 144,000 firms in Croatia were reviewed. A parametric test was conducted to check if investors who made a prior investment before the recession were able to survive during this period. It turned out that there was around a 60-70% success rate for those who made investments (Kovac, Vukovic, Kleut, & Podobnik, 2016). This information is helpful to investors when they analyze if investing is wise when a recession is approaching. Probability to succeed must be based on past data, which should be reviewed, analyzed, and applied to a given situation.

TIME SERIES ANALYSIS

Time is a very important parameter in business as time is one of the most crucial elements used to monitor how money is generated. When data is collected, it is gathered at a given period of time (Lind, Marchal & Wathen, 2017). The record of time helps information to be provided regarding how intervals are obtained, why fluctuations happen, when discrepancies arise, and to determine the extent to which a trend will continue to move in the same direction.

When a company experiences loss, most of the time a leader will still push to a maximum extent to try and save a business. According to Wu and Young (2002), in order to prevent bankruptcy survival analysis on the available statistical data must be performed. Though survival data is said to be exclusive information, it is otherwise referred to as "censored" as bankruptcy is not even detected

at some companies which seem to be performing fine until they are suddenly unable to financially support their operations. That is why time is very important to monitor along with the progress of a business. Forecasting sales versus expenses is a must.

In statistics, there are rules that must be kept to provide information based on correct and accurate data, not that from fixed data. There could be hundreds of rules to follow, but in terms of dealing with statistical process control charts, the 10 commandment rules were shared by Hoyer and Ellis (1996). This type of chart is commonly presented with the inclusion of time. Two of the commandments were written as "Thou shalt not adulterate thy data to make an out-of-control process appear to be in control" and "thou shalt not conceal an out-of-control process from thy supervisor, manager, or customer" (Hoyer & Ellis, 1996). Data should serve as a guide. Manipulating or adjusting data violates the process of control regulations. Unless these rules are adhered to and followed, a company's system cannot be improved or developed. These rules exist to prevent future issues from impacting an organization.

A control chart is applicable to every type of organization to promote a type of quality control system. Under the process control, the two sources of variability are referred to as natural and assignable. The former is uncontrollable unless a process is revised and modified, while the latter is an outcome of human error. It could be prevented, reduced or removed by analyzing the issue and knowing the cause. An example of human error could be that, supplied materials may have changed, which may require recalibration of the equipment used or any other form of improvement to correct the system (Trujillo, 2018).

In order for a control chart to work efficiently, any outcome that appears in the

chart must be transparent followed by an open discussion to mend issues identified in a system. Some companies may just be using a control chart for audit purposes. Points outside the control limit warn the management team that an action plan is needed to improve the identified unruly practice. Any company may pass the audit evaluation, but the actual structure of an operation may suffer from a number of defects. With the use of a control chart and its sets of rules, flaws in a given system could be fixed or even avoided.

Because a time series is about forecasting, the wider the numbers in a given sample of a population, the better. The more information that is given, the more useful the data is in the decision-making process. When consultants are asked to evaluate a sequence of events, they need ample data for the basis of their analysis. Ideally, a minimum of 100 responses to 1,000 responses from a conducted survey or data information must be available (Beam, 2005). For the confidence level, if an examinee would like to get a score of at least 96% for his periodic exam, out of 50 question items, he should make at most two errors. If an investor is willing to take a risk of losing 30% of his investment in five years, he should maintain an earning of seven million dollars and above within a five-years period from a 10M investment. If time is monitored and recorded along with its corresponding activity in an organization, a trend could be generated which plays a significant role in estimating future events. This will be very helpful in forecasting probable issues that might arise.

BUSINESS INTELLIGENCE USED IN CONCEPT WITH STATISTICAL TECHNIQUES

Problems in a business are dealt with through a process of decision-making. Managers in an organization follow an existing ranking. The one working in the operation

department and customer relation department, as well as those involved with business associates, competitor activities, human resources issues, or economic situations, handle decision-making on a short-term basis. They are dealing with the least numbers of data. Moreover, technical managers refer to those who are above the heads of the listed departments, top managers deal with comprehensive decisions based on the numerous amounts of data available for them to analyze. Through business intelligence, all data is converted into information which enables the decision maker to handle every issue objectively. All leaders from top to bottom use business intelligence to develop a systematic process and maximize efficiency. Therefore, the different rankings of managers are intertwined by the use of business intelligence (Zamani, Maeen, & Haghparast, 2017).

Lastly, organizational flexibility is crucial in decision making. Through business intelligence, market opportunity and threat can be gauged (Chen, 2012). This is proven essential to handle gains and losses. The aforementioned components of statistics are necessary to ensure security on the part of the investor.

CONCLUSIONS

Overall, problems are everywhere. They may be small and possible to ignore, or huge

and seemingly impossible to handle. Companies may not be able to identify the correct decision, unless they adopt the advantage of technology and use it to solicit feedback from their customers, by applying the parametric and non-parametric test, business intelligence, and concepts of statistics.

The main key in every investment is to carefully plan and make informed decisions. This can be done only through being precise, gathering data from the past, analyzing the given trends, and drawing probability to determine one's actual possibility to meet identified targets. Wrong decisions may cost a hundred dollars at the start, but in later days or years may cause the company to close.

Decision-making is dependent on what risks the decision maker is willing to take. For investors, there are four options to choose from: release more money for investment, release a reasonable amount for investment, release a small amount for investment, or stop investing altogether. What is important is to follow the guidelines upon which decisions must be based. It is not through a baseless line of thinking, but it is about going back to the data, the history of data information. From there, the decision maker can make up their minds to execute a plan for how to solve any problem that should arise, mostly by applying and using the principles of statistics, the problem solver.

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Human Creativity and Artificial Intelligence (AI): Two Distinct Requirements for Sustainable Competitive Advantage

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ABSTRACT

Increasing competition among industries requires them to be intelligent in order to make their best decisions and remain competitive in the market. Nowadays both human and artificial intelligence have made many contributions to this purpose and have helped businesses tremendously to achieve their goals. This paper explains why industries need to realize that intelligence and creativity are two distinct disciplines, and each needs to be treated differently in combination with artificial intelligence (AI) in order to maintain a sustainable competitive advantage in the future.

INTRODUCTION

Companies that are able to formulate effective strategies would be able to outperform their competition and remain at a superior position in the market when compared to others (Rothaermel, 2015). If a company is able to continuously maintain its superiority for a prolonged period of time, it will have gained a sustainable competitive advantage over other rivals (Rothaermel, 2015). The mainstream idea is that the formulation of such strategy requires management to have relevant talent and intelligence in order to execute the devised strategy both properly and successfully (Thompson, Strickland, Gamble, & Zeng'an Gao, 2008). Interestingly it was not until mid-50s that researchers finally started to distinguish between intelligence and creativity as separate phenomena (Proctor, 2014).

On the other hand, artificial intelligence (AI) has been around since 1955, the year that it was introduced to the market (Socha, 2017). AI is defined as the ability of digital machines' to make calculations and decisions and learn, faster than what humans are capable of (Socha, 2017). Since then, AI has been used in unstructured strategic decision-making processes, in simulating human thinking, in reasoning and learning, in learning or understanding from experiences, in making sense of contradictory information, and in making effective and efficient decisions for organizations (Baltzan & Phillips, 2015).

As a result, when Deep Blue, a chess-playing computer developed by IBM, defeated Gary Kasparov in the world class champion chess competitions, the strength with which the machine was able to compete in the competition was interpreted as intelligence (Newborn, 2012). Therefore, at that time period, it was safe for people to assume that the winners of these types of logical games, are those who have higher levels of intelligence, with either higher IQs or stronger analytical skills (Proctor, 2014).

In this paper, moderating factors to curate a sustainable competitive advantage such as human creativity, innovation, creativity, intelligence, and artificial intelligence will be discussed and analyzed.

HUMAN CREATIVITY

Creativity has been a popular topic recently especially in the high-tech industries (Proctor, 2014; Schilling, 2017). Although there have been several definitions for the term, there still exists much confusion about what creativity means exactly (Proctor, 2014). For instance, Maslow (1954) considered that creativity has two levels, primary and secondary. In the former, an individual's new discoveries, novel thinking, and new insights are important. Whereas, in the latter, the collective characteristics of collaborative discoveries and works of scientists extends from previous works, and creates new insights.

Although there is a lack of consensus between researchers in defining creativity (Parkhurs, 1999), many of them agree that creativity is directly related to the newness and usefulness of an idea (Mumford, 2003). Batey (2012) adds that any product resulting from creativity should be novel, useful, and original in order to be considered in the framework.

Innovation and invention

Schilling (2017) believes that innovation is the practical product of creativity that has been used in devices or processes. Proctor (2014) has furthered this concept to advocate that innovation needs to create a significant change in the application of the technology as well. He has further explained that there is a distinction between invention and innovation, where the former is "the formulation of a new idea" but the latter "concerns the practical application of new inventions into marketable products or services" (Proctor, 2014, p. 4).

Moreover, it has been argued that since many of the situations that have arisen in today's business environments are unique, have no precedence, or history, organizations that have inherited creativity and continuous innovation in their cultures are the ones that can overcome these situations and sustain their competitive advantage (Proctor, 2014). Therefore, creative thinking, innovation, and creative problem-solving abilities for all members of an organization, specifically for the management team, would be essential (Proctor, 2014).

On the other hand, research has shown that an organization's internal and external environments, including economic, political, technological, social, and cultural forces can produce opportunities as well as threats for the company. If managers do not recognize them nor continuously look for creative solutions, it might be too late to react, and the company might lose its competitive advantage in the market and among the competition (Large, 1992). In a famous case where, negative social forces were involved, Air Canada's logo was negatively associated by customers with the government's defective bureaucracy. For this reason, the sales went down (Proctor, 2014). Managers started to look for the sources of the problem, and eventually, their surveys determined why customers were reluctant to purchase tickets from them. The creative solution was to implement a subtle change to the company's logo design. This small change, using the creative approach crafted by designers, was successful and was accepted by the customers. The quick remedy for the business's problem resulted in the continuation of the company, the employees' jobs, and their overall reputation (Proctor, 2014).

Individual creativity

Research has shown that an individual's creativity is a collective function of factors such as personality, intellectual abilities, knowledge, style of thinking, environment, and motivation (Sternberg, & Lubart, 1999). Schilling (2017) suggests that certain intellectual abilities can increase creativity. These abilities include how individuals perceive issues in a different capacity, how they pick related problems that they deem to be worth pursuing, and how they explain and articulate the new ideas to others in an attempt to convince them (Schilling, 2017).

Interestingly, Schilling (2017) has argued that the effect of knowledge on creativity is double-edged, where in extreme situations, individuals' creativity will decrease in cases where the knowledge they possess is either lacking, or is too high. For instance, if an individual has a lot of knowledge in a specific field, he/she could be trapped in his/her paradigms, existing logic, and perceptions, therefore decreasing creativity

(Schilling, 2014). Also, if he/she does not have enough knowledge about the subject matter, his/her understanding would not be enough to produce a meaningful result. Therefore, again his/her creative solutions could potentially be worthless (Proctor, 2014). Therefore, a moderate knowledge of a field is optimum to produce the maximum number of creative solutions for individuals (Schilling, 2017).

Proctor (2014) has also suggested that an individual's creativity could be blocked if certain unfavorable conditions such as mindsets, emotions, perceptions, expressions, and cultural influences are present and can block individuals from creativity. By definition, a mindset is an individual's over-sensitized bias for particular parts of the information, where his/her feelings might exclude some portions of necessary information, which can create a block (Proctor, 2014).

Organizational creativity

Woodman, Sawyer, and Griffin (1993) have suggested that organizational creativity is the function of all individuals' creativities, social processes, and contextual factors within an organization. They argue that organizational creativity is not the aggregate creativity of all members combined. This notion makes it clear that organizations not only need to have creative people on board, but they also should create the proper environment, processes, and contextual factors that would foster and encourage creativity (Schiller, 2017).

For instance, methods such as suggestion boxes, idea management systems (database for uploading ideas and comments for everyone's review), employee driven idea system (an online platform for suggestions, but if accepted, are implemented by the same employee), and creativity training programs (in which managers learn how to verbally and nonverbally appreciate employees' creative thinking) can be used to increase organizational creativity (Shilling, 2017).

Other techniques such as, "one great idea" (enables individuals to have access to a company's idea depository through the intranet), developing alternative scenarios, comparative analogies for problem solving, creating mock prototypes of

potential new products, and playful design of product features, have all proved to be beneficial for organizational creativity (Schilling, 2017).

INTELLIGENCE VERSUS CREATIVITY

More intelligent people can naturally score higher on intelligence tests since they have larger working memories compared to other people which enable them to quickly find answers to complex problems (Proctor, 2014). However later studies have not been able to find a correlation between intelligence and creativity, and therefore, psychologists believe that intelligence and creativity are two distinct phenomena (Proctor, 2014). For instance, there can be people in an organization that are highly intelligent, but are not highly creative and vice versa (Proctor, 2014).

Intelligent people are more likely to use reproductive thinking, which is the use of previous experiences, to make comparisons with similar problems that they have encountered in the past in order to find quick conventional solutions for their problems (Proctor, 2014). Research has shown that this type of thinking generates rigidity in thought and only serves to consolidate the paradigms and mindsets of individuals, thus, leading to creativity blocks (Proctor, 2014).

On the other hand, creative people are more likely to think productively. This term refers to the ability to look into a problem from many different perspectives and identify multiple potential solutions (Proctor, 2014). These creative productive thinkers have the ability to form many novel combinations of solutions for the identified problems and identify the juxtaposition between dissimilar subjects to resolve issues (Proctor, 2014).

In productive thinking processes, the creative mind will consider all possible solutions for the problem including both the obvious and obscure ones, even after a promising solution has been found for the problem (Proctor, 2014).

Productive thinking styles are crucial forms of creativity for all businesses since these techniques can generate more and more solutions for the same problems. This can increase the likelihood of finding a creative solution for the issue and most probably will help the company to sustain its competitive advantage (Proctor, 2014). It has

been explained that highly productive thinking individuals have the ability to tolerate the ambivalence that might exist between the opposites, or two entirely incompatible subjects (Proctor, 2014). For instance, the same abilities for tolerating the ambivalence made it possible for Thomas Edison to invent electric lamp bulbs, as he could tolerate to combine two ambivalent objects (high-resistance filaments and high resistant parallel wiring circuits). This was something that could easily look impossible to many conventional reproductive thinkers (Proctor, 2014).

Artificial intelligence (AI)

Artificial intelligence (AI) is a digitized computational technology that enables managers to make more effective and efficient decisions (Baltzan & Phillips, 2015). There are five categories of AI systems; expert systems, neural networks, generic algorithms, intelligent agents, and virtual reality (Baltzan & Phillips, 2015). These systems can increase the speed, consistency, and problem-solving abilities (where available information is incomplete). Additionally, they are able to resolve complicated issues and boost the productivity of assembly lines, resulting in more effectiveness and efficiency (Baltzan & Phillips, 2015).

The above capabilities can easily enhance a company's competitive advantage as they make an organization more effective and efficient. However, there is no guarantee for the sustainment of competitive advantage. These systems can help automation, streamlining (removing bottlenecks and redundancies), and business reengineering processes (to find a totally different approach) (Baltzan & Phillips, 2015). Business process reengineering (BPR) systems, together with management information systems (MIS), are the only AI systems that can enhance managers' creative problem-solving capabilities to sustain the competitive advantage (Baltzan & Phillips, 2015).

If managers are not creative thinkers or creative problem solvers, the combination of the above AI capabilities (specifically BPR and MIS) would not render the best results for an organization (Baltzan & Phillips, 2015). Therefore, it becomes crucial for managers to be able to think

outside of the box and possess the ability to focus on the core strategic processes of their organizations that are critical for performance, rather than focus on managerial functions that have little impact on their organizational processes (Baltzan & Phillips, 2015).

For instance, Progressive, an insurance company, was able to innovatively make fundamental changes in its processes with the help of its BPR and MIS (Baltzan & Phillips, 2015). The company was able to reduce the settlement time for its standard claims from 31 days to four hours (Baltzan & Phillips, 2015). Progressive's use of BPR in innovation entirely reshaped and redefined the methods of the whole industry (Baltzan, & Phillips, 2015).

CONCLUSIONS

In today's dynamic nature of the markets, sustaining a competitive advantage is a must (Rothaermel, 2015). Sustainable competitive advantage is attainable through the development of a thorough comprehensive strategy that has been formulated by expert, talented, and creative managers, executed by employees and reviewed

consistently (Thompson et al., 2008). Although intelligent managers and employees are required for the success of any organization, if they are not creative problem-solvers, do not have innovative personalities, or are not novel thinkers, they may not be able to develop the most efficient strategies for their organizations. Additionally, they would not be able to resolve complex unprecedented issues and even the companies' best opportunities may be overlooked or even lost (Proctor, 2014).

If managers are not creative thinkers, even artificial intelligence and information systems such as BPR and MIS would not be effective nor efficient for their organizations. This lack of efficiency would waste the company's resources (Baltzan & Phillips, 2015). Therefore, any organization's solution for developing a sustainable competitive advantage would result from a set of strong, intelligent, creative, and innovative employees whose abilities are reinforced by their organization's supportive and rewarding culture and environment. Such an organization would be able to use its AI capabilities and sustain its competitive advantage both effectively and efficiently.

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Addressing the United Nations' Sustainable Development Goals in Germany

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ABSTRACT

This paper takes a critical look at the United Nations' sustainable development goals in regard to Germany. This paper will further examine three of the seventeen goals laid out for 2030 focusing on determining what efforts and proposed solutions towards ending poverty, eradicating hunger and achieving gender equality are undertaken. The issues of poverty, hunger and gender equity are an additional source of tension for Germany as they seek to address these concerns domestically while acting as a responsible leader internationally.

INTRODUCTION

Delicate political coalitions, a leading geopolitical position, and a complicated troubled past make Germany a country of tensions and complexities. A proud *Kulturnation*, Germany remains willfully ignorant of its historic heterogeneous makeup, its role in the history of migration flows and its economic need for immigrants. As a social-democratic state, Germany constantly strives to maintain a delicate tension. It is a generous welfare state working in conjunction with a free-market economy guided by social policies. Germany is a leading actor in the European Union. Its powerhouse economy, for which Chancellor Angela Merkel has achieved both fame and infamy, is centered around Germany's economic surplus. Economic optimism is held in tension with social anxiety about the effects of the large numbers of asylum seekers and the rise of racist nationalists into parliamentary positions in the recent election. Germany's election in September 2017 exposed racist and xenophobic movements that had been building over time, resulting in a historic upset of party coalitions. As Germany moves forward, it must confront its (re-)emerging internal conflicts as it continues to navigate and lead on the global stage.

Confronting these tensions and conflicts, Germany is taking a leading role by evaluating and constructing solutions working toward the goals set forth by the United Nations' seventeen sustainable development goals targeted for the year 2030. This paper will look at three of these goals in the case of Germany, focusing on the challenges of ending poverty, eradicating hunger, and achieving gender equality as well as their proposed solutions. The issues of poverty, hunger and gender equity are an additional source of tension for Germany as they seek to address these concerns domestically while acting as a responsible leader internationally.

ENDING POVERTY

The United Nations has created the following sustainable development goals for Germany, "Ending Poverty" and "Zero Hunger." Unsurprisingly, there is tension involved when talking about poverty in Germany, or any other affluent country with a robust welfare state for that matter. The existence of poverty in a country with a welfare state *and* an economic surplus is counter-intuitive. It is almost unthinkable to speak of poverty in Germany (or any other Western European country) when there are other regions which encounter much more extreme forms of poverty. The World Bank is central to the examination and documentation of poverty world-wide.

Germany has been a key member of the World Bank since 1952 ("EDS05 Home," n.d.), and yet, is largely excluded from World Bank reports that discuss poverty. These reports focus on new European Union (EU) member states and other countries in southeastern Europe which are in far worse economic condition than those in western Europe. It is the comparison of Germany with developing countries in Africa, the struggling Balkan nations, and even with other weaker EU member states like Greece that contribute to the denial of the existence of German poverty (Pfeiffer, 2014). Public trust in the welfare state is extremely high in regard to its provision for those in need. These multiple layers of denial have rendered poverty in Germany largely invisible. Thanks to more recent social and economic shifts, Germany is becoming increasingly aware of its perpetual problems in this area while also coming to a deeper, more convicting understanding of its role globally. In particular, the country is coming to grips with the effects of German colonialism as well as the effects of the German industry on the global South. German recognition of its complicity in the poverty cycle parallels the

nation's efforts to take a more proactive role in assisting developing countries.

Though poverty and hunger exist throughout German society, the media's attention on the subject is not mainstream, occluded by other highly politicized issues such as immigration and corporate tax evasion. In the affluent state of Germany, the question of poverty is not whether the population suffers abject, or "extreme" poverty, but of the increasing inequalities that push wage-earners further and further from the established standard of living. Official estimates state that 16.7% of the population falls below the poverty line ("Population below poverty line," n.d.). Poverty is defined in the region as those who are living at or below 60% of the average gross income of the country's population (Meyer-Rosenfeld, 2013). Many experts argue that this designation is an arbitrary one and does not properly capture the complexities, as there is a high variance of living costs across the region (Simler, 2016). The Organization for Economic Co-operation and Development (OECD) complicates the understanding of poverty in Germany by defining the poverty rate as:

the ratio of the number of people (in a given age group) whose income falls below the poverty line; taken as half the median household income of the total population. It is also available by broad age group: child poverty (0-17 years old), working-age poverty and elderly poverty (66-year-olds or more). ("Inequality - poverty rate," n.d., para. 1)

The comparison between EU states also obfuscates the actual experience of poverty as, "two countries with the same poverty rates may differ in terms of the relative income-level of the poor" ("Inequality-poverty rate," n.d., para. 1). OECD data measures poverty as those living at 50% of the median income, rather

than 60%, lowering the statistic of those living in poverty substantially.

Multiple populations have been shown to be particularly vulnerable to poverty for several systemic reasons. As will be demonstrated in the following discussion, these populations include single mothers, children, and female pensioners. Even in a powerhouse economy like Germany, poverty has a feminine face. Poverty is predominately measured at the household level. This measurement is both useful and problematic as it reveals the gender gap in poverty:

In households with an adult couple, either both partners are in poverty or neither is in poverty. So, if all adults are married or cohabiting with a person of the other sex, there would be no sex gap in poverty. Thus, the gender gap exists because single women are poorer than single men (Christopher, England, Smeeding & Philips, 2002, p. 5).

This is problematic because it removes all nuance of the female experience of cohabiting with men, assuming equal access to resources, and thus, equal quality of life. Single mothers are more vulnerable to poverty for several distinct reasons. Single mothers are shown to be more likely to live with children than single fathers. Additionally, women earn lower wages than men due to their greater presence in the service sector and the persistent gender pay gap (Christopher, England, Smeeding & Philips, 2002). Motherhood has also shown to be a factor for reduced income as women either stop working, reduce their hours or change occupations, further increasing the male-female pay gap (Christopher, England, Smeeding & Philips, 2002).

Though the German government provides child support to mothers when fathers are absent, research shows that government social transfers and tax breaks do

little to reduce gendered poverty (Christopher, England, Smeeding & Philips, 2002). Women are also less likely to pursue their rights for child support in court, thus increasing their vulnerability as they only receive government support if the father is not able to pay or is unknown (Klammer, 2009). Children are naturally subject to poverty determined by their parents' situations. Notably, children living in poverty suffer from social stigma and social exclusion in their educational experiences (Klammer, 2009).

A population often neglected in poverty research is pensioners. The feminization of poverty persists even into retirement age, and especially late retirement. European Union research illuminates the risk of poverty amongst pensioners in stating that, "Gender differences in the at-risk-of-poverty rate among those aged 75+ are fairly large, even though there are hardly any differences among the younger pensioners" (Ahornen & Bach-Othman, 2010, p. 13). Widows tend to outlive their husbands and live alone on pensions, which is shown to be connected to their vulnerability regarding poverty (Ahrnen & Bach-Othman, 2010). Women have lower pensions on average than men, largely because they work less due to child-rearing and earn less on average than their male counterparts (Sellach & Ender-Drägässer, 2000). Pensions were set at their retirement age and have not until recently been adjusted for inflation. This has been an area of debate in the last couple decades as the introduction of the euro plus continued inflation and rising costs for housing and food have put strain on the population as a whole (Boersch-Supan & Wilke, 2006). When the euro was introduced, prices were not adjusted properly, but transferred directly over from Deutsche mark to euro, devaluing savings. The elderly in the east of Germany feel this most acutely. The exodus of working-age Germans to the west after reunification

left those who stayed susceptible to poverty. Though much effort has been made to invest in the east's economy, much of this is centered in just a few urban areas, namely Berlin, Leipzig and Dresden (Nipper, 2002; Bontje, 2005). Those who owned a rural home in the east and stayed through retirement found themselves in increasing distress, often without ready access to healthcare or food as the sparse, aging rural population does not substantially contribute to a tax base to sustain the basic infrastructure.

SYSTEMIC ECONOMIC STRUCTURES

Even within a thriving economy as is the case in Germany, weak points exist and implemented measures of reform often have unintended consequences. The legislation reform in Germany passed in the early 2000's was known as "Agenda 2010." This was introduced in an effort to combat high rates of unemployment and a sluggish economy. This legislation introduced some new employment options intended to increase full-time employment. The bulk of the legislation dealt with part-time employment, which up until that point had been very limited in the German economy (Somaskanda, 2015). Flexible part-time employment was introduced and deregulated. The idea was that access to part-time work was better than no work and would effectively lead to full-time employment (Somaskanda, 2015). Unfortunately, an increase in full-time employment did not come to fruition, but instead created a growing culture of temporary part-time work. The core of the workforce in Germany, which makes up the middle class, has remained strong through this shift, though this may change when the current generation retires. The reform packet introduced, among other things, the mini-job, which allows for an employee to earn up to 450 euro per month tax-free. This was intended to supplement incomes. Instead, people started

working several mini-jobs to make ends-meet, and employers began offering mostly mini-job positions because they did not have to provide the same employment benefits or taxes required by the state. The deregulation of this type of job classification led to instances of exploitation, especially considering that there was no minimum wage in Germany at this time. Poverty increased through this mechanism.

Because the economy and labor force are highly regulated and access to work and the welfare state is limited, the informal sector is precarious, largely invisible, and not captured in official statistics. Acknowledgement of the informal sector is important to uncovering the invisible exploitation that increases the already recognized statistics on poverty in Germany. Susceptible to this type of exploitation are those who find themselves on the edge of society for some reason. Women, and men, from other EU countries who have residency in Germany but not citizenship are an example. If these EU citizens do not formally register their residency in Germany, they are not properly captured in government statistics and are often working in the low wage sector. Those who have overstayed their visas or entered illegally also find themselves in similar positions, though they find themselves under greater pressure from employers as any slipups could potentially trigger an employer to anonymously call immigration services.

Another vulnerable population that often finds themselves in situations of exploitation are asylum seekers who are in limbo until their case is decided upon. In this state of limbo, they do not have the right to work, and thus, rely on support from the government. This support is so little that they are never able to invest in their future. In many cases as little as 40 euro a month is given in addition to housing and food subsidies. Taking an honest look at the structural loopholes and informal economy

without criminalizing those experiencing poverty and exploitation within it is a necessary first step in working towards productive solutions to ending poverty and discrimination in German society.

No hunger

Addressing hunger in Germany is difficult as research on the topic is still in a nascent stage. To begin with, there is no centralized data collection on hunger in Germany by either the state or academic researchers (Pfeiffer, 2014). Pfeiffer (2014) reports that limited research has been done by a select few, but the insight and knowledge gained pales in comparison to effective and extensive research done in other western nations such as the United Kingdom and United States, and as a result, its impact on policy making has been limited (Pfeiffer, 2014). The most recent survey was completed from 2005 to 2007, examining the eating habits of 20,000 people using various methodologies. Though the results are not helpful in creating legitimate estimations of food poverty or hunger in Germany, they revealed some counter-intuitive realities that illuminate the importance of pursuing access to healthier food in addition to universal access (Pfeiffer, 2014).

Pfeiffer (2014) has done significant research on food poverty in Germany and sees food as more than just a physical need. Pfeiffer (2014) offers the definition of hunger as, “physically palpable poverty” (p. 5). She argues that while hunger occurs in Germany, food poverty is more than just making sure that a certain number of calories are present in a diet, arguing that food has a social-psychological component, and is, in fact, “deeply social” in German society, and thus, deeply related to social inclusion/exclusion, which is a central concern in the fight to end poverty (Pfeiffer, 2014). Pfeiffer (2014) argues that, “Food is essential to participation and

sociality, a central source of social capital in an individualized society” (p. 3). Those who live under the poverty line do not have expendable income to purchase food in social settings important to building relationships in German society. Going to lunch or a pub after work with colleagues or brunch with friends is important for both professional and personal relationships. Not being able to participate in such social activities, excludes a person from potential job opportunities and from friend circles, among other things in a society where it is taboo to speak of finances. Exclusion from social settings can easily translate to exclusion from professional ones.

The government has shifted responsibility for food security away from itself, delegating it to the private sector and to existing religious and moral impetus (Pfeiffer, 2014). The result of this shift was the establishment of food distribution centers and food banks. Many of these entities are run by volunteers and rely on donations. They provide meals for both adults and children during school hours for those who not receive sufficient or reliable food provision at home. Because of their reliance upon volunteers and donations, the food banks work well as a point of emergency assistance but should not be relied upon for long-term assistance (Pfeiffer, 2014). Research shows that every year 1.5 million people attend 900 food banks and 3000 food distribution centers across Germany, half of which are regular customers (Pfeiffer, 2014).

Achieve gender equity and empower all women and girls

We all committed ourselves in 1995 to implement the Beijing Platform for Action. Now we are making a new commitment with Sustainable Development Goal 5. Commitments are good. Action is better. Let us take

action! (Merkel, 2017)

The feminization of poverty is a pattern that has developed within the German welfare state. Intricately enmeshed in the issue of poverty is the prevalent gender inequality that persists despite decades of feminist thought and influence. In the reunification process of east and west Germany, it was west German culture that was given credence rather than that of east German culture. Those in the east of Germany had been accustomed to a greater degree of equality due to policies of full employment and quota systems, even though women experienced the double burden of full-time employment and full-time domestic work as wife and mother (Skard, 2015). Women were encouraged to be in the home as caretakers, and policies focusing on the family were extended, including those mentioned in the above sections. These policies, though heavily supported by the general population, have recently been critiqued as having a “re-traditionalising effect,” reinforcing traditional gender roles and norms instead of focusing on policies targeting equity (Botsch, 2015, p. 5). The report on women’s rights and gender equality rates Germany’s performance in this area as “mediocre” (Botsch, 2015). Chancellor Merkel’s (2017) declaration of action has picked up more speed than in previous years, though much is left to be desired. Discussions on gender equality in Germany focus largely on the percentage of women in leadership positions, gender pay gap and labor market participation, and female interest and participation in subject matter in secondary schools, notably, STEM fields.

Research on gender divisions in the labor force reveals that there exists both a “horizontal” and “vertical segregation” (Botsch, 2015, p. 4). “Horizontal segregation” is the distinct segregation of men and women across occupations, each being

overrepresented in their respective gender typical professions (e.g. women in the service sector, men in science and engineering) (Botsch, 2015, p. 4). “Vertical segregation” refers to a lack of women in management positions (Botsch, 2015, p. 10). The European Commission believes that “equal participation of women and men in decision-making positions is a matter of justice, respect for fundamental rights and good governance” (“2017 report on equality,” 2017, p. 28). One of the platforms for important decision-making is government. Representation of women elected into the Bundestag and at the federal state level “has remained about one-third for over ten years,” but increased to 37% by 2017 (“2017 report on equality,” 2017, p. 32). This level of representation is largely responsible for why the issue of gender inequality has not been a higher priority within the country. It is at the municipal level that women’s representation at 26% falls below the EU average of 35% (“2017 report on equality,” 2017).

Another platform for influential decision-making is corporate management. Compared to the federal government, it is in the private sector that women are far more underrepresented. Supervisory boards are shown to have increased their percentage of women over the years to just 19%, while at the executive level, women make up only 6% of board members (“The current situation,” 2012). The EU Commission has determined that countries with specific legislation targeting an increase in the number of female board members in large stock-listed companies have seen more success in attaining better representation of women than those without (“The current situation,” 2012).

Labor market participation and the persistent gender pay gap produce mixed messages on the state of gender equality in Germany. Labor market participation is up but

little progress has been made on closing the pay gap in recent years (“The current situation,” 2012). In fact, between 2010 and 2014, no progress was made at all (“The current situation,” 2012). The factors measured to determine labor market gender inequality, apart from the segregation of that labor market, are levels of employment, the predominance of atypical work (e.g. part-time), and the gender pay gap. The European Commission’s report on gender equality (2012) demonstrates that Germany is a relatively poor performer in this respect, standing at 45% labor market inequality. The report also shows that the gender pay gap, gender hours gap (i.e. unpaid work such as caretaking), and employment gap are all greatly contributing to inequality (“The current situation,” 2012). The employment gap is the least problematic in Germany as more and more women are joining the workforce in some capacity. As we saw in the horizontal segregation of the labor market, however, where women enter the market is largely related to their educational choices and attainment. The dominance of traditional family formation and gender roles still heavily influences choices and opportunities/barriers to the nature of work for women. Legally, equality is required. Yet barriers to women continue to persist, especially in the typical areas of family formation and retirement (Botsch, 2015). Women continue to be the primary caregivers for children and the elderly, especially as positions in state-run day care centers are limited. This unpaid work results in women either not working or working part-time. As of 2011, 45% of German women were working part-time instead of full-time, higher than the EU average (“The current situation,” 2017). The percentage of women working part-time is significant considering that 75% of German women between the ages of 20 and 64 are employed (“2017 report on equality,” 2017). Determining equality encompasses

factors such as economic independence, which takes the employment rate into account as well as “the number of paid working hours, which better reflects work intensity” (“2017 report on equality,” 2017, p. 12).

Unpaid work for women total, on average, almost the number of hours that an average woman works a part-time job. Women work an average of 29 hours per week while doing 20 hours of unpaid work, while men work 38 and 7 hours, respectively (“2017 report on equality,” 2017). Gender norms, gender relations and family formation are currently in shift. Women are marrying later and having less children. Though divorce is a lengthy and expensive process in Germany, it is becoming more common. Blossfield (1995) explains that, “the distinction between marital and non-marital child-bearing, and between marriage and cohabitation, are losing their normative force and divorce tends to become more of an option than a violation of social norms” (p. 201). Optimistically, Blossfield (1995) claims that the “expansion of the welfare-state-based extra familial institutions...provide alternative sources of material security, personal services, satisfaction, and leisure” (p. 201). Social exclusion due to the stigma of divorce may be disappearing, but it is crucial to note that the vulnerability of women and children should not be minimized or hidden by the seemingly generous welfare state provisions.

STRATEGIC SOLUTIONS TO MEET SDGs IN 2030

The German parliament published a set of strategic solutions in a social report in 2015 as a path for moving forward with a domestic agenda to achieve the UN sustainable development goals by 2030 (“Strategische Sozialberichterstattung,” 2015). To address the issue of poverty, and ultimately other goals in the process, the parliament committed to a range of initiatives, expansions of current policies, and investments. One of the first steps toward fighting poverty was the

institution of a minimum wage (“Strategische Sozialberichterstattung,” 2015). This was introduced gradually, first applying to only a few service jobs, such as taxi drivers and hairdressers, but now has been extended to almost all jobs, although there still exists a few exceptions. Minimum wage began at €8.50 but was increased to €8.84 by the following year (“Strategische Sozialberichterstattung,” 2015). This is extremely advantageous for women living in rural areas and less so for those in expensive urban locations due to higher costs of living. Pensions were also given a slight increase to adjust for inflation starting in 2014 and are intended to continue to increase as deemed appropriate. More importantly, commitments to increases in pensions, will bring advantages to women specifically, as there is a greater recognition of and compensation for time spent raising children (“Strategische Sozialberichterstattung,” 2015).

A couple of campaigns were initiated to attempt to address the gender wage gap. “Equal Pay Day” was a public campaign that worked to encourage transparency in wages for men and women (“Strategische Sozialberichterstattung,” 2015). A second initiative is a project entitled, “Was verdient die Frau? Wirtschaftliche Unabhängigkeit!” (What does a woman earn? Economic independence!). This project took place from 2014 to 2016. This project worked to educate women on the issues of which they should be aware regarding their professional lives, concentrating on transitional periods in their resume due to childbirth, education, etc., which persist as barriers to meaningful and rewarding work (“Strategische Sozialberichterstattung,” 2015).

One of Germany’s efforts toward gender equality is participation and implementation of an EU practice called gender mainstreaming, which:

involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities—policy development, research, advocacy, dialogue, legislation, resource allocation, and planning, implementation and monitoring of programmes and projects (“Gender mainstreaming,” n.d., para. 1).

The EU Commission and German governments have chosen to tackle these issues from a gendered perspective, focusing specifically on women, supporting the more traditional roles of women in the same breath as advocating for equality in value. A number of projects focusing on gender equality have been reported. The “equal treatment check” is undergoing development, which will result in a set of analytical tools to be utilized by employers, boards, and other supervisory entities to assess whether the law of gender equality in hiring practices and working conditions is being upheld (“2017 report on equality,” 2017, p. 13).

As childbirth has proven a barrier for women when re-entering the workforce, the German government has implemented two discrete actions to address this issue and to work toward gender equality. The Development Policy Action Plan on Gender Equality 2016-2020 increases state-funded childcare, allowing for women to return to work much more quickly than was previously possible (“Germany pledges to expand support,” n.d.). Parental leave has also intentionally been extended for men, as it has proven to contribute to more active fathers (“2017 report on equality,” 2017, p. 17). Men now receive 9 weeks of paid leave (“2017 report on equality,” 2017). This is intended to incentivize the sharing of childcare and other domestic work.

One of the most important and prominent pieces of legislation passed recently was the Act on Equal Participation of Women and Men in Leadership Positions in the private and public sector. This act requires 3500 businesses to create goals to “increase [the] proportion of women on their boards and at several management levels” (“Germany pledges to expand support,” n.d., para. 5).

Also, as of 2016, a gender quota of 30% for supervisory boards for stock-listed companies is required (“Germany pledges to expand support,” n.d.). Initiatives to increase entrepreneurship for women have been passed as an additional effort to close gender employment and earning gaps. In Mecklenburg-Pomerania, for example, an initiative was passed enabling women to obtain loans from state investment banks whose loan applications had been previously rejected by other banks (Sattar, 2015).

CONCLUSIONS

There is much to be done domestically to end poverty in Germany. Thankfully, Germany has many stable systems already in place and has already achieved a relatively high level of affluence, even among its poorest. With enough public commitment to taxes and expansion of social programs, eradication of poverty, or more realistically great reduction in poverty is arguably within reach by 2030. The more Germany opens access to the labor market, the more transparency and protection can be extended to those at risk of poverty. This includes opening the labor market further to immigrants and refugees, who are among the country’s most vulnerable.

Though poverty affects women more broadly than it does men, the current trajectory of poverty development is not toward a further feminization of poverty, but rather an increase in the poverty experienced by men. Although the statistical gap between

men and women is indeed closing, often interpreted as progress, the overall picture is not as optimistic. Evidence points to an increase in income inequality in society, not just for women. Men are experiencing a feminization of work, meaning that men will now experience more periods of interrupted work throughout their careers, causing an increase in poverty experienced by men (Klammer, 2015).

Food banks have played a key role in alleviating food poverty. However, they are not a viable long-term solution as they receive no state funds and are dependent upon both volunteers and donations to function. After much scandal in the past, a deep vein of skepticism and suspicion runs through German society, making donations hard to come by, be it for blood drives, homeless assistance, or food banks. A certain level of public oversight and trust will have to be re-established before the private sector can truly take the reins of being a stable support system that can not only meet needs sufficiently but can effectively assist clients in bettering their financial states. Research in the area of hunger, is absent and thus, is essential. Only in the past year has the government even begun to acknowledge that there might be something to address in this area. The first step of acknowledging the problem has been taken; now funding and experts are needed to step in to provide some reliable and tangible data on the subject for the appropriate governmental policies to be created and implemented.

Workers who have been unemployed long-term will experience delays in being

incorporated into the work force. The hiring process and criteria are very rigid across all sectors.

Officialness and detailed documentation is part of the fabric of German culture and society and works to exclude competent workers from finding employment. Even entry-level grocery store cashiers must obtain an official job training certification prior to work. Changing these processes will take much effort and time. Even equipping those who have been unemployed long-term with job skills, trying to fill-in the gaps of education, and training for interviews will not destroy the stigma associated with being unemployed nor will these efforts bring about a rapid change in hiring expectations or standards. Instead, this will entail a long-haul effort to create a cultural shift in the labor market. An additional challenge to addressing the gender pay gap is the cultural taboo of talking about money in general, and salaries specifically. In addition, most companies in Germany currently have non-disclosure agreements on all salary-related issues. Forcing companies to make their hiring practices and salaries transparent is crucial to gender equality efforts, and equally difficult to accomplish.

Ultimately, the greatest challenge to addressing gender inequality and poverty in Germany is to stop comparing the poor in Germany to the impoverished in places like Africa and the Indian subcontinent. These comparisons in conjunction with the national confidence and reliance upon the welfare state, hide these inequalities and prevent appropriate action from taking place.

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Transition from Linear to Circular Economy

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ABSTRACT

The contemporary model of economical production and consumption is not sustainable; if the pattern continues, humankind will need to scramble for resources. Currently, resource extraction from the earth is 1.7 times higher than her actual capacity (Watts, 2018). This paper stresses the importance of the shift from the current linear (take, make and dispose) modality to a circular (take, make and reutilize) model to maximize the value from a product by keeping it in the loop of circularity. In pursuit of this change in model, reverse logistics, performance economy, and sharing economy all need to be integrated in order to facilitate regenerative and restorative techniques which enable reusing, recycling, remanufacturing and refurbishing of resources. Businesses need to redesign and restructure their current processes so that they can reduce the consumption of resources, thus developing a competitive edge. Incineration and dumping of resources should be the last option. The assets that are able to sense, record and communicate information are referred to as “intelligent assets” which innovates “smart solutions” to enable a circular economy (MacArthur, 2016). But this paradigm shift is not possible alone through the effort of a single entity. Involvement and commitments from individual, regional, governmental and intra-governmental levels are mandatory as it helps to create a synergist effect.

INTRODUCTION

Society has always welcomed productivity since it has not only rewarded the producers with economies of scale but has also made buyers wealthier with consumer surplus. But a question remains, is this the golden rule of production and consumption or the best model for sustainable use of resources where equilibrium is obtained between the factors of production and its proportionate utility entailing the unequivocal saving of resources for upcoming progeny? The clandestine decay of resources that is jeopardizing the ecosystem is in process. Every segment of an economy including service, manufacturing and agriculture is epitomizing productivity to satiate their voracious quench for remaining competitive. Sadly, they are unable to manifest the opulence of sustainability. The problem is not with societal progress, but with the approach, which is detrimental and devastating to the environment (Sandoval, Garcia, & Goenaga, 2016).

As per a report published by the United Nations, primary resource extraction which was comprised of roughly 22 billion tons in 1970, included materials such as fossil fuel, metals, and timbers. This ballooned to roughly 70 billion tons in 2010. If the rate continues in this pattern, there will be 180 billion tons of material needed annually by 2050 (Mosbergen, 2016). The commodity price rose by 150% from 2002 to 2010, making the real price decline of the previous 100 years disappear ("Towards the circular," 2014). Regrettably, the oscillation is coming back to us, the tiny particles from cars, power plants, waste incineration, and other sources are killing over 3 million people worldwide each year (Vaughan, 2016), and the estimated annual global health cost due to air pollution is currently over \$5 trillion (Stone, 2017).

The wealthiest countries resource rapaciousness is ten times more on average

than that of poorer countries. As stated in the UN Environment report of 2010, North America and Europe had an annual per capital material footprint of 25 and 20 tons, whereas it is 9 for Asia Pacific (Mosbergen, 2016). The unequal global distribution of resources has intensified conflicting trade behavior among countries, thus creating a "dumping economy." The paradigm shift of the radical transformation of product development, process re-engineering, and selling and distribution along with responsible consumption and disposal is required for sustainability and the longevity of resources. The revision of backward and forward linkage to implement the green approach is a necessity. Thus, the time has come to draw a line between earning and caring and between vanity and insanity, where every government, business entity, and individual has to be active in the transition from the linear to circular model of production and consumption.

LINEAR ECONOMY

A linear economy is a business model that focuses on the take, make and dispose philosophy. Resources are extracted from the earth and then products are manufactured for consumption. The residuals of this consumption later accumulate in a landfill or are incinerated. Atrociously, only 14% of plastic is recycled annually, and if this continues, by 2050, there will be more plastic than fish in the oceans. Once plastic gets into the waterways, it brings \$13 billion in annual losses to tourism, shipping, and the fishing industries (Kaplan, 2016). The plastic is just an example of the negative external consequences that we are dealing with due to linearity. There are thousands of such culprits, such as aluminum, steel, papers, cans, leathers, oils, and fossil fuels. Miserably, the unhealthy competition among the corporations has reduced product life cycles,

making products obsolete and has converted them into waste, collapsing the ecological balance. Figure 1, seen below, depicts the flow of resources in a linear economy where the

resources are ultimately trashed or dumped in the landfills.



Figure 1. Linear economy flow diagram.

Although aware of the negative impact, businesses still thrive with this production methodology due to the low cost of raw material created by the competition and fewer mandatory regulation and legal penalties.

goods that are at the end of a life cycle into alternative resources, ultimately closing the loop in the industrial ecosystem and minimizing waste. Its philosophy builds on reuse, recycle, repair and remanufacture. The economic advantage of this model lies in the appropriate use of the waste, thus promoting performance economy, favoring resource productivity, and concentrating on escalating nature’s capital and its resilience (Webster, 2017). Figure 2 illustrates the flow of resources in circular model of production and consumption.

CIRCULAR ECONOMY

The circular economy advocates the shift from the traditional extract-produce-dispose economy to a restorative and regenerative approach where the focus is on extending the life cycle of a product to get the maximum value from it. The circular economy turns

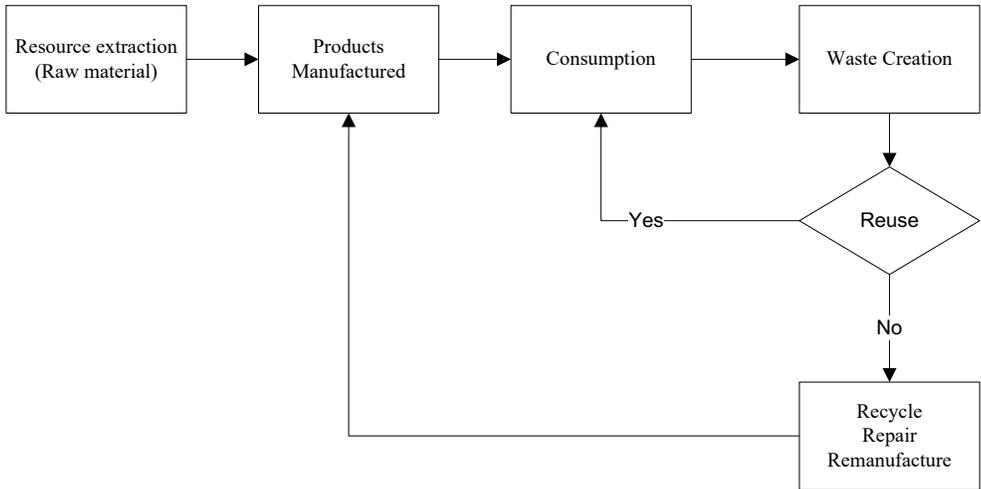


Figure 2. Circular economy flow diagram.

Maximum prioritization is given to make the resources transmit back into the production loop. Focus is on reuse, recycle,

refurbish and remanufacture, rather than dumping.

UNDERSTANDING THE CIRCULAR MODEL

IDEO, a global design company, who crafted the first computer mouse for Apple, has collaborated with the Ellen MacArthur Foundation to strategize the best modules to use for a circular economy. The butterfly diagram as shown in Figure 3, which encapsulates the biological and technical cycle of resource utilization, is a feedback read system. The biological cycle comprises of

biological materials like textiles, fruits, and foods that could be regenerated into the circular loop. The technical cycles are restorative. Both mentioned cycles advocate for reuse, refurbishing, remanufacturing and recycling of the products to the highest level possible. In the biological cycle, non-toxic products that are beneficial to the environment are returned to the biosphere directly or in the cascade of a series of uses.

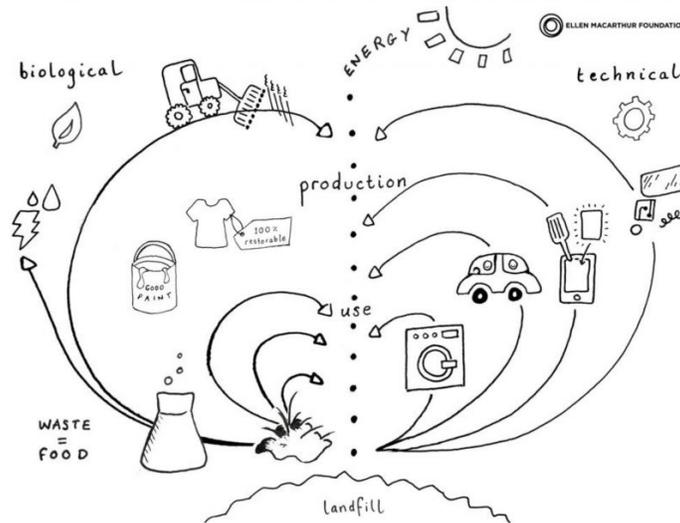


Figure 3. Butterfly diagram. ("Understand circular flows," 2014).

The circular model encourages businesses and individuals to be more mindful of environmental issues. Alternatives to wasteful packaging and fuel costs have been found through companies such as Ecovative and Lufa Farms. Ecovative has created reusable packaging from unused parts of plants (Ecovative, 2018), and Lufa Farms encourages rooftop gardens and hydroponic farming (Adam, 2015). Both concepts can be reconciled with the left side of the butterfly diagram where there is a focus on prolonging the value and life of raw materials used.

The right side of the butterfly diagram exemplifies the circular modality in technical products. It is restorative, where both the product and material would retain their

integrity and highest utility. Examples of this can be seen by companies such as Zipcar. Rather than selling a new car, Zipcar rents unused ones. Additionally, according to the Environmental Protection Agency (EPA) in the USA, in 2012 alone, 84% of unwanted clothes were trashed in a landfill or incinerated. Patagonia, a global apparel brand, focused on refurbishing the clothes so that they could be reused, and their value could be extended (Wicker, 2016). These types of small changes may not seem like a lot, but if all businesses started to use the circular economy model, great changes could be made in decreasing environment footprints.

PRINCIPLES OF CIRCULAR ECONOMY

Sandoval, Garcia, and Goenaga (2016) in their extensive study of literature related to the circular economy prioritizes regenerative posture and the eco-centric perspective as a major principle within the circular economy. The circular economy is based on 3Rs, i.e., reduction, reuse and recycle. Stahel (2018) outlined the set of principles which guide the circular economy: (i) the smaller circulation of resources will make it profitable and resource efficient; (ii) the loops of material are circular and continuous in economy and feed into a new production process, minimizing the potential waste; (iii) maintaining value, performance and quality of goods; (iv) the efficiency in managing the stocks in circular economy is inversely related with the flow speed; (v) extending ownership is a cost-efficient strategy (vi) requirement of well-functioning second-hand market (Milios, 2018). Similar principles were emphasized by FICCI, in the “Circular Economy Symposium 2018” held in India, to implement the idea of circularity into a business model. These concepts were identified as circular supply chain, recovery and recycling, product life extension, sharing platform, and selling products as a service. Out of the numerous factors that conceptualize a circular economy, the most crucial are listed below.

REVERSE LOGISTICS

Reverse logistics refers to the flow of goods and services from the point of consumption to the point of consolidation. It focuses on the backward flow of post-consumed resources

which aim at closing the loopholes within a circular economy. Reverse logistics leads resources to the stages of remanufacturing, refurbishing, reusing or recycling, ultimately increasing the value of the resources. To utilize this concept, companies should consider the modality of reverse logistics at the time of product design to help in streamlining the work and alleviating unexpected future financial burdens. At the same time, the cost of reserve logistics could be the biggest challenge when compared to the residual value of goods. In California alone, 6000 computers become surplus a day and recycling cost between \$15 to \$35 for each monitor alone (Baltzan, 2014). Reserve logistics can be intricate when compared to forward logistics and must be considered previous to its development and implementation.

The research executed by KMPG (2017) emphasizes that the use of technology and infrastructure can reduce the lead time between production and getting the resources back. The barriers to reverse logistics are geographical dispersion, material complexity, and linear lock-in. As shown in Figure 4, the traditional approach of reverse logistics has significantly larger intermediaries when compared to the strategic approach. The diagram below clarifies the traditional and strategic approach to reverse logistics. Efficient and effective handling of reverse logistics is a must. A new business initiative can fit the concept of reverse logistics and circular economy from the very first phase of the product and process design making the flow

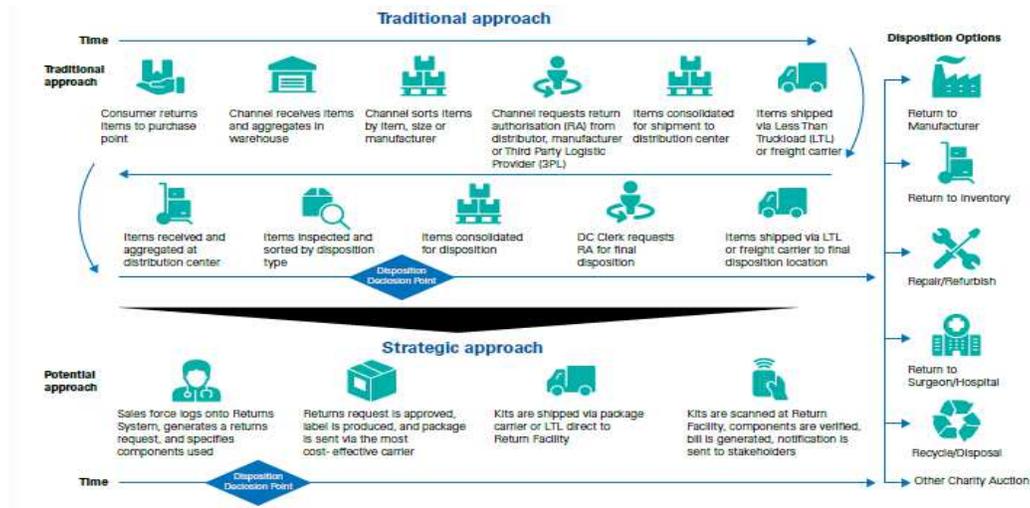


Figure 4. Traditional versus strategic logistic. (“Future-proof your reverse logistics,” 2017, p. 11).

seamless. The product design phase should focus on the listed parameters to ensure that the product lifecycle favors reverse logistics:

- *Material Selection:* material should be chosen in a way that the byproducts or scraps can be utilized again in future
- *Standardized components:* the consistent components support easy categorization and favors easy manufacturing
- *Design to last products:* the durability helps in saving resources and making products durable
- *Design for easy end-of-life sorting:* facilitates dismantling, separation and support in the reverse logistics of products

PERFORMANCE ECONOMY

The paradigm shift from the traditional to performance economy has had significant ramifications on the traditional business model. There have been changes from volume driven to value drive, energy and resource intensive to knowledge-intensive and from a linear to circular system (Stahel, 2010). Stakeholders are now more focused on smart solutions through smart products which are based on the minimum level of resource utilization.

The performance economy focuses on the service of its products. It is a paradigm shift from ownership to access economy. The customer becomes the user of the products rather than the owner of the products. Now, business models are based on an agreement to pay for use, lease, rent, and performance agreement through servitization (FICCI, 2018).

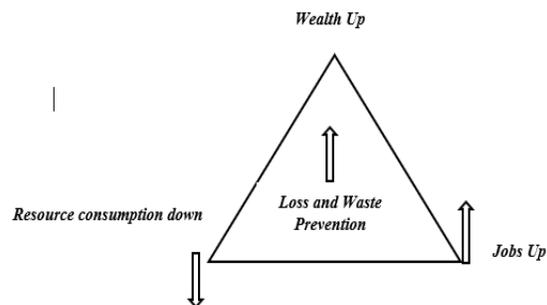


Figure 5. The objective of selling performance economy.

Examples of this can be seen with businesses such as Michelin Solutions, a US-based tire company, rather than selling their tires, lease them (Stahel, 2010, p.122) and YCloset, a China based apparel company, which leases apparel (Colao, 2012). As shown in Figure 5, both companies are practicing performance models of circular economies

which has helped to maximize wealth, lower resource consumption, create jobs and prevent loss and waste of resources (Stahel, 2010). Amalgamation of performance economy will make high-end washing machines accessible to most households.

SHARING ECONOMY

The sharing economy has revolutionized the consumption of products and services. It is based on the philosophy of sharing excess resources and has empowered ordinary people to use their excess capacity rather than keeping it (Stemler, 2017). Botsman (2015) tried to bring clarity to the muddled concept of sharing economy by stating that it is the economic system where unused assets or services are used directly from individuals. Examples of this include Airbnb and BlaBlaCar. The facilitation of the sharing economy for the circular economy is seen where customers are served through existing excess products and services rather than by the production of new ones (Egerton, 2016).

The World Economic Forum (2016) has listed economic rebalancing, material efficiency, technological changes and high-speed domestic adoptions as reasons to adopt a sharing economy. The sharing economy, which was estimated to have generated over \$229 billion in 2015, is projected to grow by 40% p.a. over the next five-years (World Economic Forum, 2016). This will bring tremendous economic, social and environmental benefits. Table 1, below, shows the various types of facilities being used in a sharing economy for each different kind of industry.

Table 1.

Various models of sharing economy with their examples.

Types	Examples
Peer-to-Peer Lending	Lending Club, Prosper, SoFi
Crowdfunding	Kickstarter, Indiegogo
Apartment/House Renting	Airbnb, Couchsurfing
Ridesharing and Carsharing	Uber, Lyft, Car2Go, Zipcar
Coworking	Share the cost of office rent, utilities
Reselling and Trading	Craigslist, eBay

FACILITATING AND IMPLEMENTING A CIRCULAR ECONOMY

Investment in the circular model brings a win-win situation for producers as well as for consumers. It brings a positive impact in the economic, societal and environmental domain of society. As per Sandoval, Garcia, and Goenaga (2016), circular economy promotes innovation, decreases the pace of global resource depletion, and reduces the overuse of natural resources. Corporations should follow a circular model as it has become an aspect of corporate social responsibility (CSR). Implementation of the circular model favors symbiosis which helps corporations to reuse their products and fosters developing ancillary industries. Further government regulation plays a crucial role in making a circular philosophy a reality. The factors mentioned below induces and facilitates the circular economic model.

CIRCULARITY AS CORPORATE SOCIAL RESPONSIBILITY (CSR)

Resource stewardship has become a part of CSR. Incorporating circularity into the operational and corporate strategies of businesses will bring radical shifts in the production and consumption of goods and services. Envisioning and practicing circularity will represent the entity fulfilling their corporate social responsibility (CSR). It will provide a competitive and comparative advantage to each company utilizing it.

Examples of this can be seen by companies such as IKEA who is collecting and reselling its previously sold products. In 2017, Google LLC diverted 91% of waste from the global data center operations away from landfills. These steps have not only economized the operation of the companies but has also unequivocally enhanced their image and reputation as they were able to reduce their environmental footprints. Circularity supports optimization of resource consumption and the extension of material life. It not only economizes the expenses and resource cost for a company, but also enhances the brand equity.

GOVERNMENT LEVEL INITIATIVES

The circular economy initiatives should not be voluntary or discretionary. Strong policies, laws, regulations, and initiatives from governmental and global arenas are deemed necessary to protect the environment and the way businesses function within it. Since 2009, the number of climate change laws has increased from 300 to 500, carbon pricing was introduced, and 20 countries in Europe levied landfill taxes.

Regulation plays a binding role in manifesting circular economy. The European Union (EU) directives on circular economy includes the EU Action Plan, which has both mandatory legislation and voluntary measures included. The inability of the corporations to comply to the mandatory measures results in economic, administrative or criminal penalties, whereas the voluntary measures are not binding. As per Milios (2018), the policy measure should focus on the following factors so that corporations will abide and work within the principle of a circular economy.

DURABILITY, REPARABILITY AND REMANUFACTURING POLICIES

The durable product lasts for a long time, is easily repaired, and has available and

accessible spare parts to support prompt product maintenance. This helps to extend the use of the product. Corporations should focus on product and process designs to make it durable and easy to repair so that the value and the life of the products increases, ultimately leading to decreased pressure on the natural resources needed to manufacture a new product.

STRENGTHENING THE SECONDARY RESOURCE MARKET

Clear policies should be in place to facilitate the secondary market, which includes the national or cross-border movement of used products. The developed secondary market facilitates the reserve logistic of the products after its end use, which could later be recycled, reused, remanufactured or refurbished.

POLICIES PROMOTING AND HARMONIZING EXTENDED PRODUCER RESPONSIBILITY (EPR)

Often there is a minimal incentive for a producer to innovate and design eco-friendly products. If the mechanism of reverse logistic is developed well, which supports the collection of the product back to the producer, third parties could reap the end benefits. For example, the scrapped electronic appliances are often collected and traded by third parties, thus disincentivizing the original producer from investing in the circular model. So, a corporation as well the regulators should have clear policy in place on ERP, which will encourage producers to invest in the circular model.

SYMBIOSIS

Symbiosis is the process where the end output from one activity is again used as a resource for another cycle so that the life cycle of the product is prolonged. Companies' generated waste is not only an environmental problem, but it is also an economic loss for the companies. The waste output of a company

could be a valuable input resource for another company. Symbiosis, through regenerative and restorative techniques, could be used to prolong the life of the material.

An exemplary initiative in the circularity model can be seen in Srinivasan's Garbage to

Gold initiative (Drolia, 2016). The process illustrated in Figure 6 is a perfect apotheosis of symbiosis at the most rudimentary level where biomimicry can be observed.

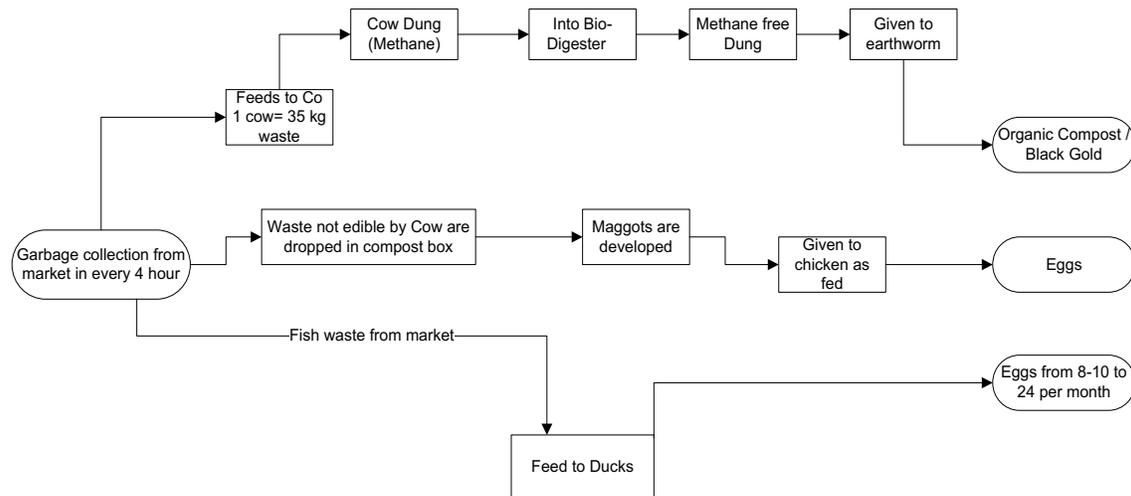


Figure 6. Flowchart showing symbiosis using the natural cycle.

In this process, no form of technology, artificial catalyst, or artificial feeds are used. The waste from a vegetable market, rather than ending up in a landfill, are used as the feed for cow, fish, hen and duck, ultimately generating energy and organic compost as an output. Corporations can use the modality of symbiosis in the same way. For example, old disposed batteries, rather than being dumped in a landfill, could be collected and recycled for future use. The waste water coming from industries after treatment can be used for irrigation. The plastic and metal waste should not be allowed to be disposed of haphazardly, but rather, should be collected for further use. These steps help in looping back the resources into the production cycle which extends their life and enhances their utility.

USING TECHNOLOGY TO LEVERAGE CIRCULARITY

Technology creates interconnectedness, which facilitates the circular economy. For example, the use of radio frequency

identification (RFID) makes tracking and collection of products easier, which supports reverse logistics. All the factors mentioned above, like sharing and performance economy along with symbiosis are supported by technology. Botsman (2013) has emphasized the capacity of technology to create an efficient platform where millions of haves are matched with millions of wants. By 2020, 25-50 billion devices will be connected in the loop created by the Internet of things (IoT) which would create a trillion-dollar economy.

The breakthrough and commencement of the fourth industrial revolution is seeing advancements in technology like artificial intelligence (AI), augmentation reality, blockchain technology, and machine learnings. This has unlocked enormous potential in the circular model. Corporations embedding technological innovation to their product and process design can outperform resource utilization. "Liam" robot used by Apple to disassemble iPhones has collected 61 million

pounds of reusable materials which includes 22,204 pounds of gold (Lacy, 2017).

The Internet of things (IoT) has given birth to “intelligent asset.” Figure 7 shows how the

scanner (asset) is remotely assessed by the producer and how maintenance is carried out as per the requirement leading to increase the life of the scanner.

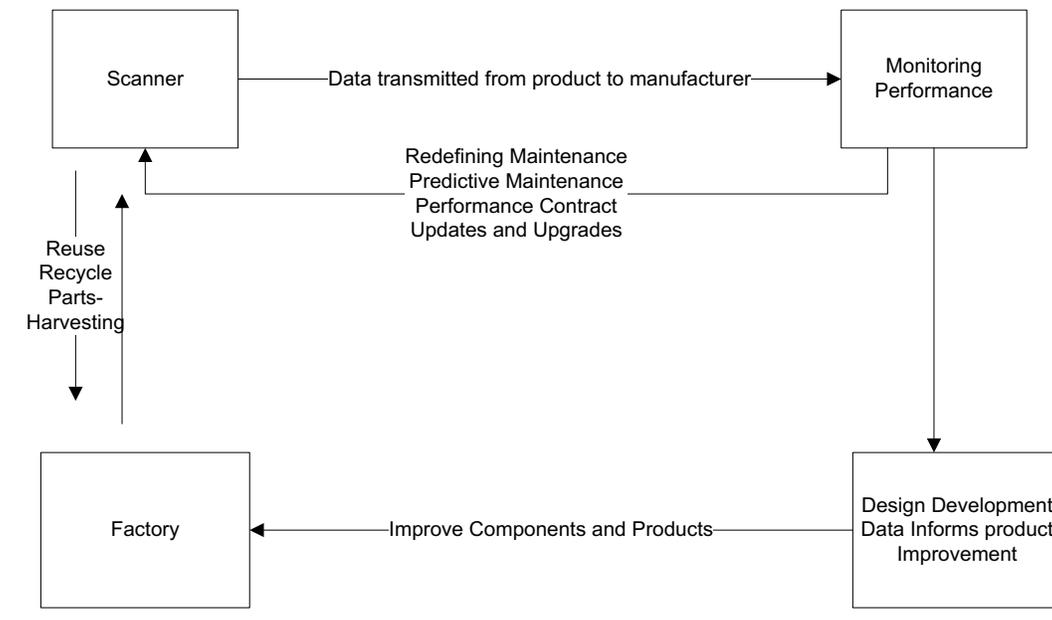


Figure 7. Intelligent Asset Transfer of data for circular economy. (“Intelligent assets: Unlocking the circular economy potential” 2016, p. 38).

Rather than selling the scanner to the user, the manufacture has rented it. The user will pay on a pay per use basis. At the end, the product will go back to the manufacture for recycling. It has facilitated the performance and sharing economy.

AWARENESS OF CIRCULAR ECONOMY

With all of the advantages of a circular economy, it is phenomenal that there is still a majority of people who do not know about this concept (Guo, Geng, Sterr, Zhu, & Liu, 2017). Governments, business entities, NGOs and INGOs all have a responsibility to collaborate and make the public aware of this style of economy. Some ways in which this can be done are as follows:

- Governments can incorporate the concept of the circular economy into academic courses. This will help younger generations

to understand the very basics of circularity and its importance.

- Intermediaries like suppliers and retailers can also incorporate the circular model of production in their forward and backward linkage
- NGOs should focus on community and local institutional awareness programs. INGOs can play a pivotal role in the capacity building of stakeholders.

CONCLUSIONS

Shifting the production and consumption pattern from a linear to circular economy is unequivocally important to reduce the pressure in the extraction of resources from the environment. The circular economy through reverse logistic, performance and sharing economy helps in reusing, recycling, refurbishing and remanufacturing products

which otherwise would have been thrown into landfills or incinerated.

Sadly, the clarity about the circular economy is still muddled. Awareness in local, regional as well as at the global arena is needed to move the circular economy into the mainstream economy. Corporations should

embed circular philosophy into their product and process design from the very beginning. Additionally, the government should provide incentives and regulations to facilitate the implementation of a circular economy so that collectively we can work towards sustainability.

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Reading as a Basis of Vocabulary Growth: Application to an EFL Setting

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ABSTRACT

This paper will explore the critical roles of vocabulary development and teaching reading as a basis of vocabulary growth in an advanced English as a Foreign Language (EFL) classroom. An application is promoted from the discussion, which identifies the interrelation between reading and vocabulary growth (Krashen, 1989; Horst, Cobb, Cobb, & Meara, 1998; Waring & Nation, 2004; Hunt & Beglar, 2005). The quality of a reading text and the learners' interests are considerations that must be taken into account for improved vocabulary instruction.

INTRODUCTION

The recent growing demand of learning English as a foreign language in Vietnam has been reflected through the accelerating rates of overseas study opportunities and the emergence of accreditation programs. In 2017, about 130,000 Vietnamese students attended academic programs outside of Vietnam, in roughly 50 countries, thus doubling the figure from 2009 (Viet, 2017). According to the Vietnamese Ministry of Education and Training (MoET), during the first quarters in 2017, 84 universities and colleges all over the country were offering accreditation programs in 273 programs in numerous fields, the most popular of which were Business Administration and Finance (MoET, 2017). There were eight programs related to the English language (MoET, 2017). Students who attended these programs needed to prove competency in lexis and reading skills. August, Carlo, Dressler and Snow (2005), in highlighting the role of vocabulary development, stated that students' limited lexicons might increase the risk of students' developing a learning disability. Exposure to reading materials in English throughout these specified programs has enhanced the participating students' vocabulary development. Being alert to this understanding, the Premier Language School in Ho Chi Minh City has been incorporating reading and vocabulary instruction into their curriculum through a course entitled, Vocabulary Building and Reading Comprehension (VR). This course is dedicated to advanced learners who need to improve their vocabulary repertoires and reading skills either for academic or professional purposes. These conditions initiated the premise of this research in identifying the contribution of teaching reading to students' vocabulary

development, especially in enriching lexicons.

READING AS FUNDAMENTAL TO VOCABULARY GROWTH

Krashen (1989) asserts that spelling and vocabulary competence are both subconsciously acquired through comprehensible written input. This process is referred to as incidental learning. Waring and Nation (2004) perpetuate this assertion by exploring the relationship between reading in a foreign language and lexical acquisition. It was found that reading helped to improve the vocabulary learning process (Waring & Nation, 2004). Most research suggests learners be introduced to 3-6 new words for every hour of reading (Waring & Nation, 2004). Regardless of the relatively low average rate of vocabulary gained (13.8%), the benefits are increased through repeated encounters (Waring & Nation, 2004). Horst, Cobb, Cobb, and Meara (1998) agreed that extensive reading helped learners to enrich their personal database of words, improve lexical access speed, and build network linkages among words.

PEDAGOGICAL APPLICATION

The contributions of reading to vocabulary growth are monumental. Thus, it is essential for the pedagogical implications to be explored. Below is an acquisitive analysis of the requirements for selecting a reading text. Following the analysis is a specific reading text, which serves as a sample that is applicable for students when focusing on vocabulary development.

REQUIREMENTS OF READING TEXTS

An effective reading text should meet the following criteria. First, implicit instruction should occur through meaning-focused reading, thus, increasing vocabulary

size through extensive reading and fluency development (Hunt & Beglar, 2005). Second, extensive reading should ensure a word-rich environment that can invigorate vocabulary size. Students should be able to select materials that suit their interests (Hunt & Beglar, 2005). Third, a core topic with integrated tasks such as discussions or watching videos and narrow reading can enhance levels of lexical access and reading fluency (Hunt & Beglar, 2005). Next, reading texts should be easy to read and be appropriate for the given level. The coverage rate, the amount of vocabulary the readers know, should be at least 98% (Waring & Nation, 2004). In addition, reading texts must foster word consciousness (Schmitt, 2000).

AN INCIDENTAL READING TEXT

A reading text (see Appendix) was selected with intensive consideration based on the criteria discussed above. The 98.25% coverage rate of the words the students were familiar with throughout text guarantees a sustainable number of new words, i.e. 10 new words over 572 words, for students of the advanced level. The core topic of this text is the Son Doong Cave, the world's largest and most unique cave in Vietnam. This cave has attracted both domestic and international concerns as there is a current fight to save it. Thus, this topic has the potential to engage students in reading the text. The informative and thoughtful message of the text is suitable for advanced learners. If possible, pictures of the cave should be presented to raise excitement levels and interest in the content previous to reading the text. This story is an example of the incorporation of authentic material as it was found in the Huffington Post. Articles in the Huffington Post are of high lexical quality and are able to create a

word-rich environment for vocabulary learning. The paragraphs were numbered to make the text easier to read. Finally, identifying the new word's word functions (see Appendix) rejuvenates students' word consciousness.

CONCLUSION AND IMPLICATIONS

Extensive reading is truly beneficial for vocabulary development, an essential element in foreign language acquisition. In material design, teachers should take into account the following: meaning-focused reading, fluency development, vocabulary size enhancement, a core topic, a word-rich environment, word consciousness, and reader-friendliness. The reading text suggested above can be incorporated into either an in-class reading comprehension practice or a summative assessment like homework. Another implication idea is for students to practice guessing the meaning of new words by using context clues.

APPENDIX

Reading Text

Before you read: There are 10 new words in this article. As you read it, identify these words' functions. Do not look at the glossary until you finish reading the article.

In Vietnam, A Rush to Save the World's Largest Cave from the Masses

By Nick Visser – Huffington Post

“Caves are fragile environments. They don't regenerate very quickly, and once they're broken, they're broken.”

1. The world's largest cave, the **mammoth** Hang Son Doong in Vietnam, is a relative babe-in-arms when it comes to natural history: The **cavern** was first discovered in 1991, then lost, then found again before it was first explored in 2009. But less than a decade later, environmentalists are **scrambling** to save the site from thousands of tourists and a development company set on **thrusting** a cable car into its depths.

2. Located in Phong Nha-Ke Bang national park, a UNESCO World Heritage Site, Son Doong stretches more than 5.5 miles underground, reaches heights of 650 feet and is home to its own jungle, ecosystem and river. Just one tour company has a concession to **venture** into the cave, and only a few hundred people are allowed inside the fragile environment every year. But that could soon change.

3. HuffPost RYOT spoke with local activists, cavers and the **spelunkers** who first explored Son Doong about the local government's secretive plans that may allow developers to build a massive cable car project that'd bring more than 1,000 people to the cave each day.

Such threats are not new.

4. In 2014, a group of local activists helped **stave off** a proposal to build a \$212 million, 6.5-mile-long cable car throughout Phong Nha-Ke Bang park that would **traverse** parts of Son Doong. The announcement drew widespread condemnation despite assurances from the cable car company, Sun Group, that it would be an environmentally friendly way to view the park that'd bring “thousands of jobs for the poor local people.”

5. Any plans at Son Doong would likely echo another project, completed by another company last year, at the country's Mount Fansipan, one of the tallest peaks in the region. The site is now home to a cable car that cut a journey that used to take three days on foot down to 20 minutes. The system can now bring 2,000 people to the summit every hour, and, like the country's iconic Ha Long Bay, has become a hive of tourist activity.

6. Environmentalists fear that if the Son Doong project were to go forward, it would bring **hordes** of tourists to a **pristine** ecosystem protected by its relative unreachability.

7. A Facebook group operating under the name Save Son Doong has called on the Vietnamese government to again reject the proposal, saying the “project must be stopped before it has a huge and damaging impact on the Son Doong cave and the ecosystem of the entire Phong Nha-Ke Bang national park,” a Change.org petition organized by the group says.

8. Those concerns were echoed by the British Cave Research Association, the group that declared Son Doong the largest of its kind and, alongside the explorer Howard Limbert, led the first expedition to the site.

9. “Caves are fragile environments. They don’t regenerate very quickly, and once they’re broken, they’re broken,” Deb Limbert, a team leader for the group, told HuffPost RYOT. Government officials in the province of Quang Binh, where Son Doong is located, have told local media there are no plans to support a new cable car project. In March, HuffPost RYOT filmed a representative of the cable car company traveling to the cave with Phong Nha-Ke Bang park employees.

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Glossary (from Merriam-Webster Dictionary)

a mammoth(n) – something immense (supremely good) of its kind

a cavern (n) – a cave; especially : one of large or indefinite extent

scrambling(adj.) from **to scramble** (v) – to struggle eagerly or unceremoniously for possession of something

to thrust st.(v)– to push or drive with force

to venture(v) – to proceed especially in the face of danger

a spelunker (n) – one who makes a hobby of exploring and studying caves

stave off(v) – to fend off

to traversest.(v) – to move or pass along or through

hordes(n) – a large unorganized group of individuals

pristine(adj.) – not spoiled, corrupted, or polluted (as by civilization)

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Dear Readers,

We hope you have enjoyed this issue of the Westcliff International Journal of Applied Research (WIJAR). We would like to thank all of the contributors who have put forth the time and effort required to provide high-quality articles for others to read. It is an honor and a privilege to have once again received contributions from authors around the globe. We hope these articles inspire others to contribute their great ideas and research to future WIJAR publications.

We also want to recognize the Westcliff University Writing Center for working tirelessly to assist authors in further refining their articles and providing writing tips. Our appreciation cannot be understated.

---WIJAR Committee Members

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Keep an eye out for WIJAR's next call for articles, opening February 2019.

We look forward to your Spring contributions!