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**FOSTERING SUSTAINABLE INNOVATION THROUGH CREATIVE
DESTRUCTION THEORY**

INDUSTRY, INNOVATION & INFRASTRUCTURE - ENCYCLOPEDIA OF THE UN
SUSTAINABLE DEVELOPMENT GOALS

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SYNONYMS

- Modernization
- Transmutation
- Technological revolution

DEFINITION

- In view of addressing the focus of this chapter, conceptual definition of the term innovation as provided in the Business Dictionary (Online) “*is the process of translating an idea or invention into a good or service that creates value for which customers will pay*”.

In the current era of technological transformation, innovation can be thought of as the mastermind behind the growth of businesses, particularly when the focus is geared towards maximising profits in the midst of fierce competition (Arque-Castells and Spulber, 2019; Carayannis et al, 2019). Innovation give rise to a situation where obsolete or existing means of production are almost forced to become obsolete on the basis of creativity in human ingenuity, which is due to continuous advancement in Research and Development (R&D) championed by entrepreneurs. Linked with the theory of creative destruction as coined by the Austrian Economist, Joseph Schumpeter in 1942, the process of innovation normally result in the ‘*birth and death of ideas*’, but with the former taking lead role in transforming the world as creative ideas continue to manifest itself in the world economy. Such approach to creative destruction is perceived as a necessary evil, given the scope it generate through nurturing of human creativity to cater for a rising global population, saturated by their insatiable needs (Kopp, 2019).

INTRODUCTION

The current information age is modelled on the advancement of innovative mindset of creative thinkers, championed through means associated with transformative technologies embodied on events like, high speed internet and payment system, thereby making it possible for transactions to be dealt with almost instantaneously. Such developments are essentially vital, given its prospect for championing growth rate and dynamism in the world economy and also, the need to ensure living conditions are adequately satisfied, particularly in the direction of the Sustainable Development Goals (SDG) earmarked for full implementation in the year 2030. The concept of innovation is widely used in all walks of life - the effort of Schumpeter’s paradoxical term, “*creative destruction*” became highly prominent in the 1950s, which many economists in recent time have endeavoured to linked with free market economics (Cozzi and Galli, 2019; Benigno and Fornaro, 2018). Creative destruction as proposed by Schumpeter, and also explained by Alm and Cox (Online) is essentially facts about capitalism, which is thought to be a shorthand description of free market’s messy way of delivering progress. This concise summary of Schumpeter’s ideology is thought to be echoing criticism of capitalism by acknowledging that, lost jobs or vanishing companies are considered part of the growth system of creative destruction. In view of the UN drive to achieving the SDG goals by 2030, it is believed that creative destruction modelled on innovation will make it possible for societies that embraces creative destruction to operate on a growth pathway of higher productivity, through the creation and destruction of industrial processes. The process of entrepreneurial efforts will make it possible for citizens to realize the benefits of new or innovative products, with the hope of making it possible to shorten working week, improving employee skills profile and also, enhancing living conditions (linked with SDG1 and 2 agendas).

The concept of creative destruction has become topical in the field of Economics, especially in the design of continuous time innovation and growth models, and more recently, the emergence of Dynamic Stochastic General Equilibrium (DSGE) – the use of such a model to mimic Schumpeter’s creative destruction ideology seem to be consistent with microeconomic foundation connected with resource reallocation from less productive / obsolete firms to more innovatively productive firms as a way of championing sustained growth in the global economy (Cozzi and Galli, 2019: 2; Jackson, 2018a).

Several studies have allay the importance of transformative technologies for the present and future generations in the world (Jackson and Jabbie, 2020; Hsieh, Klenow and Nath, 2019; KPMG, 2019; Prouty, 2018). Creative innovation is seen as the way forward for institutions (both in relation to domestic and foreign firms) to champion sustained development and competition in the global economy. The inkling of Schumpeter’s creative destruction ideology is making its way in terms of infusing determination into people’s (including corporate firms and governments) mindset to stand the time of changing their approach of doing business, more so in the direction of developing innovative thoughts geared towards making an impact on standard of living (Hsieh et al, 2019; Jackson and Jackson, 2017). Such approach as seen at present, is being championed through transformative technologies, which to some is perceived as high risk taking to the demise or changed operations of already established businesses or institutional settings. Such risks could also be interpreted as opportunities for those corporate or government-led institutions that are ready to transform their way of doing things in keeping pace with the fast rate of technological innovations in the world economy – such efforts could be sustainably pursued where entrepreneurs are making an effort to work collaboratively with communities, particularly customers in enhancement of firms’ social performances (Awan and Sroufe, 2019).

SCHUMPETER'S THEORY OF INNOVATION AND ITS CREATIVE DESTRUCTION ECONOMICS

The concept of creative destruction as alluded by Schumpeter has come as a lasting legacy in the subject matter of (Development) Economics. Such approach is seen to be noticeably pursued in all areas of professional endeavours, particularly that which is geared towards developing the human innovative mind to become creative, while also harnessing their entrepreneurial ability to expand wealth capacity (Cozzi, Pataracchia, Pfeiffer and Ratto, 2017). Schumpeter’s contribution to creative destruction economics has been carved under the notion of developing the human “*innovative and entrepreneurial intellectual capacity*”, which requires old fashion means of doing things to be buried in tandem with emerging innovations - supposedly with the ulterior motive of making things better in enhancing sustained progress through human endeavours (Kopp, 2019). Such focus on innovation and entrepreneurship as emphasised by Schumpeter also requires partnership with the other SDGs, which affirm the way forward as excerpted in a commitment from the Better Business Better World report produced by the Business & Sustainable Development Commission:

"This is the first time that the private sector (i.e. everything other than governments) has been called on to play a key role in achieving the global development agenda – and not in terms of charity, but by exploring new business opportunities. Achieving the SDGs could open up an estimated \$12 trillion in market opportunities (ING, online)".

In his book titled “*Theory of Economic Development*”, Schumpeter (1912) emphasised the importance of the ‘*entrepreneur*’, whose role is to develop creative ideas – such ideas are meant to be revolutionary in a way that set the pace for dynamism in society, thereby making it

possible for the world economy to transcend from its static mode, akin to the notion of “*Circular Flow*”. Drawing on from early literature on the creative destruction concept, the ideal is now taking a revolutionary turn, as the pace of innovation is championing the way forward in tackling climate change as explored by George, Merrill and Schillebeeckx (2020). Their studies was able to explore challenges in tackling climate change, with the aim of pursuing the UN SDG agenda. More critically, it is believed that digital technologies have made great stride through continuous efforts of entrepreneurial efforts (this incorporate social, institutional and sustainable entrepreneurs) pursued in the development of business models and ecosystems, and also masterminded by trusts and institutional logics. The identification of problems as addressed in George et al study (2020), mainly associated with issues pertaining to how organizations’ businesses impact on climate change could also be seen as a form of exploring the full extent of creative destruction concept – in this case, innovative ideas are certainly in the way of destroying existing means of utilising the earth’s resources, while new ecosystem structures like eco-friendly technologies are sure to create the potential for positive impact on society.

To Schumpeter as mentioned in his book “*Theory of Economic Development: an inquiry into profits, capital, credit, interest and the business cycle*”, development, which is perceived as a form of historical process of structural change is thought to be highly driven by innovation – this as highlighted in an excerpt from Śledzik’s (2013: 90) work is divided into five types:

- Launch of new product or a new species of already known product;
- Application of new methods of production or sales of a product (not yet proven in the industry);
- Opening of a new market (the market for which a branch of the industry was not yet represented)
- Acquiring of new sources of supply of raw material or semi-finished goods;

On a similar note as highlighted the works of Śledzik (2013) and Ajor and Alikor (2020), their empirical examination explores the relationship between innovative mindset and organisational sustainability using the case of Small and Medium Enterprises (SMEs) in the Rivers state, Nigeria. Their study concludes that executives of SMEs should be entrepreneurially innovative in a bid to making it possible for their organisations to become sustainably competitive through initiation of strategic actions and campaigns geared towards keeping SMEs alive.

Transformational competency as asserted in the work of Saffa and Jabbie (2020) should be set as the backbone in fostering innovation and entrepreneurship, particularly in the present age of transformative technologies, where businesses are seen to be preparing themselves to become innovatively creative as a way of taking lead position in the marketplace. In a survey conducted by KPMG (2019) on technology innovation, Internet of Thing (IoT) was seen to be ranked as the top driver of business transformation, both in the present and the future. Research based on the International Data Corporation (IDC) forecast IoT spending to reach \$745 billion towards end 2019 and reaching \$1.2 trillion by the year 2022. Such spending is believed to be supported by the pursued dedication of high entrepreneurial ability of skilled human resource potential to ensure investments in innovation is effectively utilised in leading the way on creative destruction, where the gains on firms closure will also result in the creation of transformative opportunities. As addressed Cozzi and Galli’s (2019: 5) empirical study, dedicated Research and Development in innovation will make it possible for firms to increase their share in business competitiveness through actions taken in registering of patents, while being in a position to create expansion in business operations.

There are myriads of empirical proxies to assert the notion of creative destruction on macroeconomic performances (both in terms of long-run growth, economic fluctuations, structural adjustment and market factor fluctuations) as originally postulated by Schumpeter – example of such cases include factor reallocation and, in particular, job flows (Caballero and Hammour, 2001). Whittling it down to microeconomic foundation, such creative destruction approach is characterised by vagaries of decisions that are bent on creating and destroying production activities. Decision around the dismantling of existing systems are also hinged on the complexity of events and to name a few, ‘*strategic entrepreneurial talents and technological innovations*’. As emphasised by Caballero and Hammour (1994; 1998; 2005), the failure of such creative innovative ideas can have macroeconomic ramifications, with its interweaving connection on the concept of creative destruction. The notion of Schumpeter’s creative destruction economics have demonstrated itself through transcending of things happening in the world economy as highlighted in the work of Davis, Haltiwanger and Schuh (latterly referred to as DHS, 1996) – their empirical observations could be seen to present a case of job flow in the United States of America’s manufacturing sector. Based on this, DHS (1996: 2) were able to provide a definition around the concept of job creation (destruction) as the positive (negative) net employment change at the establishment level, and from one period to the next. On this note, it was concluded that over 10% of jobs at any point in time were not in existence a year before or will cease to exist in a year’s later. In a nutshell, the concept of Schumpeter’s creative destruction economics is alluring to the fact that well over 10% of jobs are likely to be destroyed each year, and with the possibility of creating the same amount within a year on account of entrepreneurial innovations connected with transformative technologies.

In relation to recent studies, Kogan, Papanikolaou and Stoffman (2020: 39) developed a general equilibrium model in a bid to assess the effects of innovation on asset returns. The main feature of the model is based on the fact that, benefits from technological progress are not shared symmetrically across all agents in the economic system. In this vein, it is thought that technological improvements partially benefit agents that are key in the creation and implementation of new ideas – more appealing to Schumpeter’s creative destruction theory. It can be made clear here to note the shocks pertaining to innovative improvement in technology can result in a considerable rationalization of wealth among households. The takeaway from their study shows that at equilibrium level, shareholders will pursue investment in firms with potential to grow, notwithstanding the scope for low average returns, given the fact that they provide insurance against increases in the probability of future wealth reallocation (Kogan et al: *ibid*).

While some have remained on the positive side of Schumpeter about the benefit of restructuring during times of depression as a result of destruction caused by improvement in innovative technologies, it is also believed by some that restructuring can be seen as a period of contraction – in fact, such rate of increased destruction would normally followed by a surge in opportunities or boom during the recovery period of cyclical economic downturn (Caballero and Hammour, 2001). There is a belief that businesses would be inclined to replace jobs destroyed during time of depression (recession), but in a heterogeneous productive environment, there is the possibility of other scenarios cropping up, which are mostly beyond the ambit of an entrepreneur or business owners – an expanded scope for heterogeneity in family income as a means for future research was proposed by Kegan et (*ibid*) in their study on how creative destruction is impacting on inequalities in stock market investment.

Discursive literatures around the notion of the benefits and limitations of creative destruction economics would never cease to be placed as critical point of contention. In order to

accommodate transformational change, one would allude to the idea of Schumpeter, which in relation to the current era of post-modernity have not cease to influence human imagination regarding the importance of entrepreneurship as the root of innovation. The notion of creative destruction viewed from the pessimistic side of things would always bring thoughts around costs relating to transformational means of implementing change, which in the current era is modelled on hi-tech investments.

Moving forward with future research in the area of addressing research gap, efforts must be made to explore the complexities of firms, in this case with homogenous and heterogeneous entities in a bid to address the vagaries of technological opportunities that are avail for business to become robustly competitive in a fierce market of digital transformation. The polarization of job market means that technological advances can only be made complementary to sub-set of workers' skills – in this regard, it is therefore important for R&D to be emphasised in quantifying the role of technological progress, which is a considered determinant of the human capital risk to businesses (details outlined in Autor, Katz and Kearney, 2006; Kugan et al, 2020).

In a bid to address research gap in the discourse of creative destruction, there is a very high scope for technological innovation or progress to interrupt traditional mode of production, thereby resulting in an increase rate of uncertainty in business continuity and also, the longevity of job opportunities. In this vein, preference for robust control will make it possible for high level of uncertainty to increase agents' demand for insurance against improved rate of technological progress embodied in the time ahead. Also, there is a need to further research on the relevance of factor productivity given the rapid rate of technological innovation that is almost killing existing businesses. In such a case, entrepreneurial capacity should be built such that a review of the relevance of production factors are regularly assessed, while at the same time encouraging innovative ideas in a bid to make it possible for businesses to stand the test of fierce competition.

CREATIVE DESTRUCTION LINKAGES WITH THE UNITED NATIONS SDGs

In view of discourses surrounding Schumpeter's creative destruction economics, one would certainly attest to the myriad of gains that lies ahead in terms of its link with the UN SDGs. The continued pressure on a growing world population is making it mandatory for firms or business enterprises to adjust to change, and more so the demands to become competitively sustainable in this earthly world. As addressed by Schumpeter in the creative destruction economic theory, one is with the view of using it in critiquing Rev. Thomas R. Malthus on his theory of population, which assert the view that the growth of population in geometric term is inconsistent with subsistence means of production, which he perceived to be growing in arithmetic term (Malthus, 1826: 2; also excerpted in Palumbo, 2010: 2-3). In view of Schumpeter's drive to stimulate human thought on his notion of 'Innovation and Entrepreneurship', it is clear that regardless of the threat caused to a swing in entrepreneurial adjustments, the pace of present day technological pace is sure to demystify Malthus's theory, which assert that technological pace of development would surpass what he thought was an astronomical rise in population growth during his era of existence in the world. Such ideology is certainly said to be making positive impact on present day society with regard to the call for reducing poverty (SDG1). On this note, it is worthwhile to note that human innovation is certainly geared towards ensuring technological pace of development supports the call for reducing poverty level – a means of ensuring starvation is drastically curtailed (linked with SDG2). Equally, human pursued intervention in exploring diverse means of technologies

connected with food and medical technologies are also giving way to prolonging human lives through healthily living (SDG3).

More specifically, it is believed that the alluring ideology of Schumpeter to postulate his creative destruction economic theory is a reassuring motivation for enterprises to continue their search in the area of new creativity – to address it, there is a need to ensure institutions are well capacitated in the direction of embracing SDG4, 5 and 8. In the move to fostering innovation, with the underlying intention of making an impact on transformational technologies, it is certain that much needed efforts would be required to ensure educational investment is made an integral part of national governments and also, the core of institutional objectives.

Innovations requires people to make themselves *au fait* with modern means of technology, while also advancing their thirst for knowledge to develop on existing practices in championing high level competition in society (Saffa and Jabbie, 2020; Jackson, Jackson and Jackson, 2020). Equally, institutions should prepare themselves to make sure inclusivity is made an integral part of institutional objectives – in which case, equality in gender participation must be seen as an important element and therefore, should be encouraged in all walks of life. There are plethora of gains that can be envisaged, where men and women are made an integral part of the endeavour to champion innovation, with the enabling ambition of fostering transformational technologies at the highest level (Jackson and Jackson, 2020; Jabbie, Barrie and Tamuke, 2020). More advantageously to the highlighted SDGs is the scope of expanding opportunities for society to create better opportunities in the direction of high level employment, championed through mega means of technological development in ensuring businesses are able to stand the time of intense competition in the current age of digital technology. In this situation, there are myriad of gains to be made, both in terms of personal benefits to individuals (who would be assured of receiving high level of skills set to face competition), employers (through improved scope for profitability) and also, governments through improved tax revenues that can be used for stimulating and diversifying investment opportunities. Examples in this direction could be utilised in the expansion of essential facilities such as road construction, digitising transport network system and investment in high powered technologies (for example 5G and Artificial Intelligence, currently championed in the developed economies). Such endeavours are sure to incentivize high scope for Foreign Direct Investments (FDI), which will also build capacity for home-based investors to share risks in their pursuit of investment ventures through Public Private Partnership (PPP) arrangements.

More closely linked with Schumpeter's creative destruction theory is the move for human innovation and entrepreneurial ability to address concerns around renewable and clean energy, which is though could assist in sustaining the already depleted earth's natural resources (SDG7 and 9) – example in this direction include '*Smart-efficient energy, Wind turbine, Solar Power, Artificial Intelligence (AI) and Internet of thing (IoT)*'. Amongst the highlighted examples, AI and IoT seem to be making their way in dictating the pace of automated transactions across continental borders (KPMG, n/d; OECD, 2019). In this regard and as specified in the OECD (2019) report in going digital, there is an emphasis on the production of high quality of data to champion innovation in the current age of technology. It is certainly true that data is the engine of research as pursued by firms and government-led institutions, particularly in addressing key areas of focus with regard to product development, service delivery and market-led development. Most importantly, and where data integrity and sharing is concerned, there is an onus on public service institutions like the government-led statistical office of individual economies to keep stakeholders informed about information that will make it possible for firms

or enterprises to utilise resources in the best possible way to facilitate competitive edge in their area of business activities (Jackson, 2020).

While it is good to focus attention on SDG9, which addressed the capacity to foster innovation and infrastructural development through smart technologies, there is also a need for state actors and also private sector entrepreneurs to be very attentive in a bid to reduce inequalities (SDG10). Inequality in many ways breed corruption (Jackson and Jabbie, 2019; Jackson, 2018), particularly in a situation where state actors and those in position of trust are turning blind eyes from the realities of ensuring investments in the creation of wealth (in this case, development of technology capacity) is done equitably, with attention focused in engaging individual talents irrespective of social status in society (See Jabbie, Barrie and Tamuke, 2020). The prospect for economies to foster high level of innovation should be done in a way that incorporate citizens from all sectors of the world economy – in this regard, both men and women alike should be seen as an asset in term of infusing their ingenious skills in developing high capacity for advancing technologies geared in following the pathway of Schumpeter’s creative destruction ideology. In this regard, the capacity to address technological developments should embrace new and creative ideas from citizens, which is hoped will compete fiercely with existing technologies.

Technological innovation in the present age of creative innovation is making progress in the direction of impacting positively in developing facilities that are sustainably efficient for cities and communities alike (SDG11). Such facilities can be seen through development in Artificial Intelligence (AI), which embraces the application of hi-tech scientific technology and machine learning to mention (OEC, 2018). As addressed in an OECD (2019) publication, there is a need for cross-cutting policies to be instituted in ensuring the move to high-powered skills is promoted in a bid to making it possible for cities and communities across the world to become efficient as masterminded by human intelligence. In this regard, governments, through its ambit of the public service (also linked with SDG 16 and 17) should endeavour to draw on available information by indulging business, educational institutions and learners regarding emerging skills-set needed to make it possible for the world to move in the positive direction of Schumpeter’s creative destruction ideology (OECD, 2019). This implies that, regardless of the risk of institutions and technologies phasing out, there are also opportunities for the establishment of new skills that will be more engaging for new generation of people to be engaged in decent work / improved economic activities. Such move will also come positively in supporting governments’ agenda to capacitate institutions, while also addressing welfare needs of citizens throughout the universe.

RELEVANCE OF INNOVATION AND ITS LINK WITH CREATIVE DESTRUCTION TO WORLD ECONOMY

Innovation is an essential engine in the promotion of Schumpeter’s creative destruction theory given the capacity of new discoveries to create an atmosphere for industries / firms to keep up to date with the latest forms of invention in a bid to ensure their sustained survival. Innovation has the potential of killing old ideas, but more in the positive direction of infusing competitiveness in satisfying the varied tastes of consumers in the world community. The existence of trade liberalization amongst regions in the world economy is an attestation of the relevance of innovation and its associated link with the concept of creative destruction – for example, Hsieh et al (2019) empirically proved this in their study by using the case of Canada and the United States of America (USA), in which the benefits resulted in a sustained increase

in job reallocation for both small and big firms. The resulting outcome of their model shows that trade liberalization accelerates the process of creative destruction, which in effect also accounted for a rapid flow of technology transfer across the two countries. To support the claim of innovation's positive associated link with creative destruction, several empirical studies on model construction have been pursued lately in different parts of the world to attest growth prospect effects of trade liberalization (Buera and Oberfield, 2020; Akcigit, Ates and Impullitti, 2018; Perla, Tonetti and Waugh, 2019).

It is worthwhile for such approach like trade liberalization to be addressed with caution despite its acclaimed positive impact on many of the developed economies. With reference to Akcigit et al (2018) study, one can be very much critical about the dichotomy along the line of both the positive and negative gains on tariffs as opposed to free trade liberalization, which is thought to support Schumpeter's creative destruction concept. As addressed by Jackson and Jabbie (forthcoming), one would be very much inclined to be on the cautious side of adopting a mild form of protectionist approach (backed by Private Public Partnership arrangements) in ensuring industries in the developing economy market are protected against the emergence of big firms, which overall is sure to have a short term impact on welfare loss, particularly for those employed in the unskilled job cadres. There is certainly a win-win situation to be made from innovation that result in the approach to liberalizing trade, wherein firms are allowed to reallocate across continental borders. As emphasised by Perla et al (2019), there is a huge cost to creative destruction, which takes the form of reallocating labour away from production line, given the introduction of innovative means of technology, but a gain for economies where production factors are transferred, on account the opportunity cost to accessing cheaper forms of factor productivity. On interpretation of Hsieh et al (2019) model outcome, it is but certain that the resulting dynamic gains from trade liberalization are enormous when compared to a more static model approach, particularly in the case with homogenous firms.

On the whole, there are both winners and losers in the model of creative destruction Economics as masterminded by Joseph Schumpeter, particularly when the focus is geared towards maximising efficiency through human innovation to facilitate technological transformation. Opportunities gained through utilisation of Schumpeter's creative destruction model is very much beneficial to capacitating people seeking to become competitive in their pursuit of skills development. While also for organisations and government-led institutions alike, there is an opportunity to improve and transform the world into becoming a better place to live through uptake of modern technologies such as Artificial Intelligence (AI). With the model being applied throughout in the case with both homogenous and heterogeneous firm situations (Hsieh et al, 2019; Perla et al, 2019), there is high hopes that the drive to achieving all of the SDGs will become a reality. In addition, with the drive to foster global competitiveness in business operations, businesses will be free to transfer technological provisions in areas / regions where resource investments are considered relatively cheap by taking advantage of low cost factor productivity (for example, labour and land space). This is also a time for those transferring technologies to explore the full potential of human creativity when the focus is on the internationalisation of business models. As noted by Siedschlag and Zheng (2015: 183) in their econometric study of examining linkages between the internationalisation of firms and their innovation and productivity performance (with data from Ireland, 2004–2008), the outcome revealed that, relative to firms that served the domestic market only, firms with international activities were more likely to invest in innovation, with successful outcomes in the area of innovation output, and higher labour productivity. Lost opportunities would always be gained somewhere else, given the need for institutions / firms to focus attention on a global approach of utilising innovation and competitiveness.

Innovation is certainly seen as the way forward in keeping pace with Schumpeter's creative destruction economics. Huffman (2019) provided a balanced analysis of the importance of both destruction and creation to economic growth in his model – in this, he decoupled the destruction (or exit) from the creation (or research) and in contrast with existing literatures on the concept, he emphasised the importance of decisions made by agents, but they ultimately influence on each other. In other words, decision pertaining to destruction is as equally important as the need to be creative (Stokey, 2009) - in this vein, the model demonstrate that a halt in destruction will also result in slow growth. An equilibrium point of a balance between destruction and creation may not necessarily yield the optimum - this is factual as decision to remain at equilibrium point may give rise to either too high or low a level of innovation, while the impact on destruction may even manifest itself as too high or low. In balancing the risk of creation versus destruction that is likely to arise during thought spanning innovation, Huffman (2019) proposed that the utilisation of a non-linear tax / subsidy scheme (which is considered to be of great impact to Research and Development) may impact on welfare, relative to equilibrium for which consequences may prove too harsh, particularly when the outcome is more on the destructive side. The practical application of creative destruction model by firms' in business model is one that needs applauding, given the emphasis placed in ensuring innovation is prioritised as the driving force behind technological development and growth as emphasised in the study from Huffman (2019). In the present age of digital innovation in businesses and work activities, there is certainly going to be winners and losers, who with the right level of motivation incentives are sure to take advantage of available opportunities that result in an overall pathway of sustained growth in the global economy, which is in line with the SDG9 agenda (Hoffman, 2019; Klette et al., 2004).

In furtherance of the relevance of innovation and its link with creative destruction concept, Awan and Scroufe (2019) demonstrated the interconnectedness of social sustainability with innovation performance. Despite several studies have addressed the impact of collaboration on innovation (Fidel, Schlesinger and Emilo, 2018; Sakka, St-Pierre and Bahri, 2019), in particular Awan and Scroufe (2019) were very much unique in their empirical investigation using Partial Least Squares Structural Equation Modelling (PLS-SEM) to explore the mediating role of firms' social performance between collaboration and innovation performance. Where other studies have focused purely on factor productivity components (see Hoffman, 2019; Hsieh et al, 2019), outcome from Awan and Scroufe's (2019) study shows high level of potential when social concerns are addressed in the process of firms' innovation drive. Their focus on the future of collaboration as a means of addressing sustainable innovation is also in tandem with a study carried out by Fidel, Schlesinger and Emilo (2018), who provided empirical evidence on the direct effects of two strategic resources, namely '*Customer Orientation and Customer Knowledge (CKM)*' and their outcome on innovation capacity and marketing results with SMEs. In this, the outcome demonstrated the importance of CKM and customer orientation – these are considered relevant strategic resources for the development of innovation capacity and marketing results. CKM approach is considered very vital in a climate of creative destruction given that firms, and particularly in this case SMEs will be more inclined to orient their customers' minds about new (technology) innovations. This is a worthwhile approach that supports SDG agenda (reference to SDG1, 2 8 and 9), particularly with regard to ensuring SMEs existence are sustained, even with the emergence of innovations, which can either result in destruction or creation, more so in the direction of expansion (reduction) in growth and jobs opportunities.

CONCLUSION AND RECOMMENDATIONS

In view of the discourse on this chapter, one will assert that creative destruction concept is quite a relevant tool in promoting sustainable innovations in the global economy – despite its critiques in terms of disruption to existing technology, it can also be seen as the engine to supporting sustained level of growth and development, where institutions, businesses and firms (both SMEs and large-scale-enterprises) are able to utilise creative innovations or R&D opportunities in support of achieving sustained level of growth in the world economy.

Critics of Schumpeter's creative destruction ideology are still perceiving it as problematic to institutional mode of addressing sustained level of profitability and also the promotion of social inequality (Peck, 2005; Florida, 2002). In reality and where the drive to innovative thinking is concerned, more so in relation to promoting free and competitive trade, businesses / firms will be very much placed at effectively utilising production factors like human resource potential to access opportunities across international borders (reference to study by Siedschlag and Zheng, 2015). Literature extracts utilised in this study have emphasised on the relevance of creative destruction concept in ensuring the drive towards innovation is well supported by entrepreneurial capacity to champion the productive capacity of institutions. While it can be a scary process for firms and businesses to grapple with the reality of innovation's impact on the sustainability of their operations, it is good to note that, innovation comes with opportunities, and failure to embrace creativity can also impact institutions' capacity to grow, especially in the current environment of transformative technologies (Hsieh et al, 2019; Huffman, 2019).

Modern economies are becoming ever increasingly sophisticated through engagement in transformative technologies and the dedication of entrepreneurial skills / creative innovation devoted to ensuring such approaches are championed sustainably, with their impacts positively felt in the direction of potential growth for the global economy. It is certain that the future of the world economy will continue to grow in the direction of heterogeneous trends in the effort to foster creative innovations, supposedly needed to address growth in world population and meeting the demands of human insatiable wants. There is an ever growing need for collaboration to be established amongst institutions in the world to make sure innovative ideas are translated into reality – possibly one that mimic that of '*Customer Orientation and Customer Knowledge (CKM)*' as empirically founded by scholars like Fidel et al (2018) and Awan and Scroufe (2019). The concept of creative destruction has modelled itself to become a universal language - one that is acceptable in the world of transformational competencies, which means that its impact should not only be limited to large firms or enterprises, but also a beneficial factor for SMEs, which are considered the bedrock for economic growth, particularly in under-developed economies mostly located in regions around Africa, Latin America and some parts of the Asia bloc.

In as much as the thrust of Schumpeter's creative destruction concept has been modelled on the gains of creativity, which is backed by the ingenuity of (entrepreneurial) innovations, one should not lose sight of its inherent risks to the global economy given that opportunities created can also result in lost ventures for some. Hence, there is a need for concerted effort to be placed at the heart of institutional collaboration and strategic actions in support of the sustainability of SMEs' existence (as already mentioned by authors like Awan and Scroufe, 2019 and Ajour and Alikor, 2020). This could involve move in the direction of Import Substitution

Industrialization approach that protect institutions like SMEs, with scope for Public Private Partnership (PPP) in a bid to ensuring risks are shared, while also creating an environment for job sustainability in communities (Jackson and Jabbie, forthcoming).

In a bid to moving forward in fostering innovation, with the focus being on creative destruction in the world economy, organisations must seek to adopt a model that support organizational scope for achieving sustained growth and development through consideration on variety of model approaches. On this note, the undermentioned points are worth considering as a way of ensuring the ideology of creative destruction continue to rein in the effort to fostering institutional growth and development in the world economy:

- While it is necessary to ensure the pursuit of innovation supports the continued drive on creative destruction, risks to firms or businesses continuation would always be an integral part of the model and ultimately, raising high concerns around inequality for institutions like SMEs and also economies in the under-developed world. In this regard, and as emphasised by Huffman (2018), government policies that favours subsidy / grant and tax reduction for vulnerable businesses must be encouraged as the way forward. The identified policy approach(es) could also be utilised to promote the capacity for future scope in the area of R&D for local / national organizations of all types (SMEs, Universities, etc.) to access in a bid to nurture creative innovations that ultimately result in new wave of (job) opportunities for people. Such provision could include expansion in areas relating to ‘*Smart-efficient energy, Wind turbine technology, Solar Power expansion, Artificial Intelligence (AI) and Internet of Thing (IoT)*’, which are also relevant in addressing SDGs associated with decent work and economic growth (SDG8) and technological innovation and industrialization (KPMG, n/d; OECD, 2018 and 2019). Furthermore, tertiary education institutions, particularly universities must seek to nurture creativity that utilizes the best and most skilful professionals – registered patents from innovation could also be utilised to increase potential for attracting foreign direct investment opportunities.
- Given high level of risks that creative destruction brings to the sustained survival of institutions, particularly SMEs, there is likelihood for firms or businesses to seek an option for merger-acquisition in a bid to access resources or continue their existence in the world of business (Caballero and Hammour, 2001). Where such approach is the case, governments, particularly those in under-developed economies should seek to promote an initiative that support Import Substitution Industrialization (ISI) strategy in a bid to protect local industries or support their capacity to become competitive in the midst of bigger firms’ emergence in situations where trade liberalization is part of a common market system. More cautiously, ISI needs to be monitored given the experiences of businesses exploiting it as a form of unproductive rent-seeking venture, which limit their potential of becoming creatively innovative (Koroma, 1996; Jackson and Jabbie, forthcoming; Jerome, Ajakaiye, 2019). In order to avoid failures as experienced in the early time of its inception, ISI if adopted must be linked to reward and where necessary merged with PPP solicited funds in a bid to ensuring bureaucracy is minimized in situation where government is actively involved. Opportunities for future should promote openness in exploring the best way by which innovation could be fostered, but with its underlying focus on the creation of newer opportunities and more importantly, incorporating welfare gains that are considered to be of value-added to the continued pace of institutional destruction, which may arise on account of the emergence of new skills or transformative technologies.

CROSS-REFERENCES

- Decent Work and Economic Growth [SDG8]
- Good Health and Well-being (SDG3)
- Sustainable Cities and Communities (SDG11)

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