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The Use of Sustainable Business Models in Emerging Markets: How is it Influenced by Macroeconomic Trends?

A Case Study of the Indian Dairy Industry

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Abstract

Businesses are increasingly attracted to Emerging Markets due to the potential of increased demand for goods and services, driven mostly by macroeconomic trends in the external business environment. However, the business model approach for emerging markets differs from the one for developed markets as they are faced with a different set of demand and supply conditions. The purpose of this study is to examine how macroeconomic trends are influencing the adoption of sustainable business models in emerging markets to address the challenges of the bottom of the pyramid. The study is based on a theoretical review of literature on macroeconomic trends in emerging markets, sustainable business models, creating shared value and corporate social responsibility, and the bottom of the pyramid. The research used a qualitative approach through a case study of the Indian dairy industry, looking at two dairy companies, Amul and Vijaya Dairy. Empirical data was gathered through both primary sources in the form of semi-structured interviews and observations, and from secondary sources. On the basis of the findings of this research, it was revealed that macroeconomic trends especially, political and technological factors have a strong influence on the adoption of sustainable business models to deliver on social value, by increasing on supplier's capacity for the bottom of the pyramid.

Keywords: Emerging Markets, Sustainable Business Models, Macroeconomic Trends, Macroeconomic Environment, Bottom of the Pyramid, Creating Shared Value, Corporate Social Responsibility.

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List of Abbreviations

BoP	Bottom of the Pyramid
CAGR	Compound Annual Growth Rate
CIA	Central Intelligence Agency
CSR	Corporate Social Responsibility
EMs	Emerging Markets
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investments
FTSE	Financial Times Stock Exchange
GOI	Government of India
IBEF	India Brand Equity Foundation
ILRI	International Livestock Research Institute
IMF	International Monetary Fund
MMT	Million Metric Tonnes
NDDDB	National Dairy and Development Board
OECD	Organization for Economic Co-operation and Development
PESTEL	Political, Economic, Social, Technological, Environmental, Legal
SBMs	Sustainable Business Models
UN DESA	United Nations Department of Economic and Social Affairs
UN SDGs	United Nations Sustainable Development Goals

1 Introduction

1.1 Background

1.1.1 Macroeconomic Trends in Emerging Markets

In recent years, there has been increased attention among scholars, multinationals, intergovernmental institutions, foreign trade associations and other stakeholders on emerging markets, henceforth referred to as EMs. Most EMs are at the forefront of both demographic and economic transition; hence becoming very attractive markets for investments. These markets are experiencing major changes in their macroeconomic environment. One of the main aspects of these changes is the massive global population growth estimated to increase to 8.5 billion people by 2030, whereby India and Nigeria account for most of the growth (UN DESA, 2015). Also, rapid economic growth rate is another aspect of macroeconomic environment changes occurring in EMs. China and India are an illustration of the fast-economic growth in EMs as they are projected to be the first and second world's largest economies respectively by 2050 (PWC, 2015). The trends in EMs are not only related to the economic and demographic factors, but also include all macroeconomic environment forces ranging from political, social, technological, environmental and legal. According to Lubin and Esty (2010), these trends in EMs translate into higher demand for goods and services.

These trends in the macroeconomic environment have led to a set of new challenges. The EMs, characterized by rapid urbanization and industrialization are facing an increased demand for goods and services; which puts intense pressure on the ecological and social systems and have intensified the competition for natural resources (Hart & Milstein, 1999; Lubin & Esty, 2010). Moreover, the rapid economic growth continues to create greater income inequalities in both developed countries such as the US and in EMs such as India. Dabla-Norris et al (2015) argue that the rising inequalities in advanced economies, EMs and the developing countries is a cause for widespread concern since it entails large social costs and has significant implications for growth and macroeconomic stability.

Additionally, population growth and urbanization have caused enormous infrastructural and environmental challenges especially in EMS' cities, experiencing high levels of pollution in the form of acid rain, smog and greenhouse gas emissions (Hart, 1997). Cities in EMS, such as Beijing in China and New Delhi in India, have very high level of pollution resulting in several deaths from non-communicable diseases (Gujar et al, 2010). These challenges have acquired interest among various stakeholders leading to several initiatives to address them as they have a substantial impact on the economic pyramid. One of the main actions taken is the 2030 Agenda for Sustainable Development in the form of Sustainable Development Goals (SDGs). It was launched by the United Nations in 2015 aiming to tackle many of the world problems including income inequalities, climate change and irresponsible consumption and production (United Nations, General Assembly, 2015). The sensitization of the above goals in addition to social pressure, has made the corporate environment increasingly aware of its role in sustainable development.

Most of the challenges emanating from macroeconomic trends have a profound effect on the bottom of the pyramid, henceforth referred to as the BoP. According to Prahalad (1999), the bottom of the pyramid consists of 3-4 billion people whose per capita income is less than \$1500 (PPP) per year, the clear majority living in rural villages, urban slums and shanty towns.

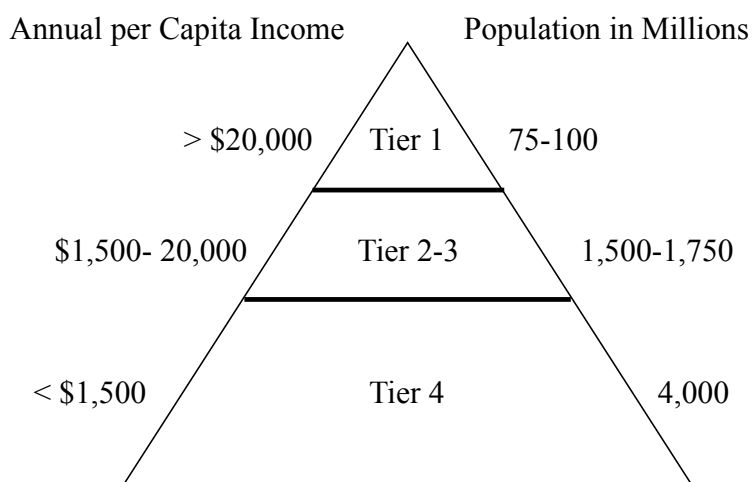


Figure 1 The Economic Pyramid (Prahalad & Hammond, 2002)

The BoP market is also classified as 'Tier 4' and holds a vast market and economic potential (Prahalad, 1999). According to Hart (1997), economic growth has increased demand for goods and services leading to more extractive industries and infrastructure developments which have

degraded the ecosystems and increased poverty and competition for scarce natural resources. Hart & Milstein (1999), argue that the current rate of consumption is unsustainable, therefore, there is increased pressure on businesses to strategically focus on sustainable development while generating profits. Thus, businesses must then reinvent their strategies from the capitalist business models used in developed markets as they are not suitable in EMs which are characterized by different set of challenges, demand and supply conditions (Hart & Milstein 1999; Prahalad & Hart, 2002; London & Hart 2004). To succeed in these markets, businesses are urged to adopt new strategies based on developing relationships with non-traditional partners, redefining productivity in the value chain, reconceiving products and markets, co-inventing custom solutions and building local capacity (London & Hart, 2004; Porter & Kramer, 2011). It is then becoming increasingly important for businesses to pursue sustainable development in EMs, through the adoption of sustainable business models, henceforth referred to as SBMs, across the value chains.

1.1.2 Sustainable Business Models in Emerging Markets

Faced by several macroeconomic challenges such as growing income inequalities, depletion of natural resources, climate change and pollution, the use of SBMs to tackle these challenges especially in EMs is indispensable. Businesses are increasingly aware of the necessity of the economic perspective to take when solving social and environmental problems as they stimulate an opportunity for their own business development (Michellini, 2012). Businesses are no longer viewing sustainability as a corporate social responsibility, instead they are integrating it into the core of their businesses and strategies through the adoption of SBMs. An SBM is a business model that takes a holistic view of sustainable value by integrating the economic, environmental and social value forms, also known as the triple bottom line (Hart & Milstein 2003; Willard 2012; Elkington 2013; Evans et al 2017).

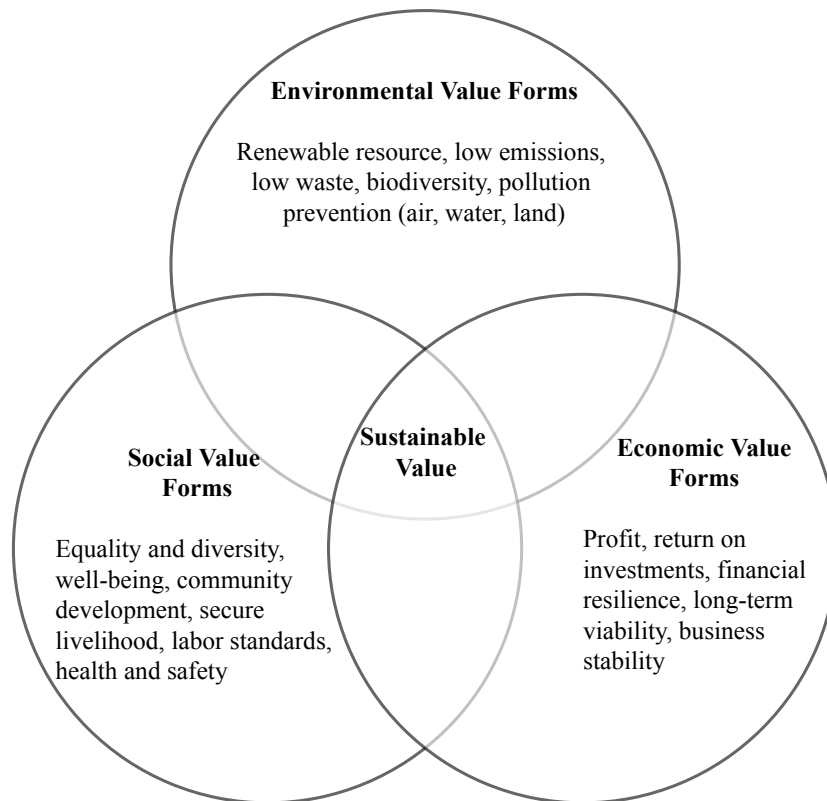


Figure 2 Sustainable Business Models Aspects (Evan et al, 2017)

The different set of challenges in EMs have encouraged businesses to focus on technologies, markets, partners, suppliers, customers and other stakeholders to identify sustainability opportunities that can help avoid collision between growing demand for goods and services and the diminishing stock of material supply (Hart & Milstein, 1999). Sustainability for enterprises is linked to the creation of shareholder value through the identification and adoption of strategies and practices that create sustainable value for firms in consumer, emerging and survival markets (Hart & Milstein 1999, 2003). Stubbs & Cocklin (2008) argue that businesses adopting SBM must develop internal structural and cultural capabilities needed to achieve firm-level sustainability through collaborating with key stakeholders.

As mentioned above, a significant proportion of EMs population belongs to the BoP. Karnani (2007) argues that the best way for the private sector to help alleviate poverty within the BoP is by emphasizing on buying from the poor as producers rather than selling to them. Moreover, Porter & Kramer (2011) argue that businesses can redefine productivity in their value chain through a revaluation of their procurement practices; whereby they can improve the productivity and quality of their suppliers through increasing access to inputs, sharing technologies and providing finance. Therefore, collaboration with stakeholders especially with

suppliers within the business value chain is necessary for sustainable development through the adoption of SBMs to address the challenges faced by the BoP.

As much as there is research on the opportunities for businesses in BoP market, researchers have mainly focused on the ‘consumer’ side of the supply chain and only little attention has been paid to the ‘supplier or producer’ side of the supply chain. Therefore, our study aims to identify the use or adoption of SBMs to address the challenges and opportunities faced by the BoP especially on the ‘supplier’ or ‘producer’ side of the value chain, in which we specifically look at the social and environmental aspects of the SBMs within the dairy industry.

1.1.3 India and the Indian Dairy industry

India, as an EM, is among the fastest-growing economies in the world. The Indian economy is projected to grow at 7.3% and 7.5% in 2018 and 2019 respectively (World Bank, 2018a). The country has been experiencing most of the macroeconomic changes in EMs such as fast economic growth, rapid urbanization and fast population growth attracting both investors and multinationals as an alternative market of the developed countries experiencing slower growth. The macroeconomic changes in India have trickled down to the agricultural industry, one of India’s main industry and the primary source of livelihood for about 58% of the country’s population (IBEF, 2018a). Considered as one of the largest sub sectors of the Indian agriculture sector, the dairy industry is expected to grow at 15% compounded annual growth rate, henceforth referred to as CAGR, from 2016-2020 to reach \$146.2 billion in market value (IBEF, 2018a).

The introduction of policies such as the National Dairy Plan and Dairy Entrepreneurship Development Scheme by the Government of India, henceforth referred to as GOI, are some of the political developments aimed at promoting the development of the agricultural industry (Ministry of Agriculture & Farmers Welfare, GOI, n.d.). Additionally, the country is experiencing a massive economic growth that has caused a rise in incomes and growth of the middle class leading to an increase in people’s purchasing power. Moreover, concerning the social environment, it is experiencing a radical change in the demography. India is projected to be the most populated country in 2024, with the highest percentage of young people in the world, increasing urbanization and influencing the consumer’s lifestyle and preferences (IBEF, 2018b). Technological trends such as innovation are also affecting both people and businesses.

The adoption of mobile solutions in agriculture in India, for example, has helped improve livelihoods through the provision of access to financial services, provision of agricultural information, improvement of data visibility and supply chain efficiency, and easiness of markets access (Vodafone Group, 2015). All these macroeconomic changes are having a major impact on the demand and supply of dairy products with changes in the dairy supply chain from the point of production to the point of consumption.

However, the Indian dairy industry continues to experience several challenges affecting its productivity. The industry is highly fragmented with the unorganized sector dominating the market which inhibits economies of scale (Ohlan, 2016). The unorganized sector is characterized by small vendors collecting milk from villages and selling it in small markets in which they adulterate it compromising on the health and safety of the consumers (Rao et al, 2014). Other challenges affecting the dairy sector include; low milk yields, scarcity of water and land resources, undue interference by the government in the affairs of dairy cooperatives, lack of strict regulations by the government on the unethical practices of unscrupulous private operators, lack of access for smallholders to institutional credit, lack of professional management and lack of a well-defined national policy for dairy development (Sinha, 2007). The industry is also facing a growing demand for dairy products that outpaces the growth in supply, seasonality of milk production, lower milk output per animal in comparison with the industry average and minimal export activity (Nagpure, 2014).

In addition to the above mentioned challenges, the same macroeconomic trends such as the burgeoning population, economic growth, urbanization and industrialization are putting a considerable strain on the country's environmental resources, causing climate change, water scarcity, land degradation and increased resource competition for food and feed. Additionally, the trends have caused higher income inequalities creating increased pressure from the government, the society and other stakeholders, for businesses to adopt SBMs throughout the business value chains to address the social and environmental problems arising. Therefore, sustainability of the Indian dairy industry is becoming critical. The dairy industry is also a major source of employment in rural areas especially for the BoP and among women. Hence, has a great potential in alleviating poverty. Businesses within the dairy industry are expected to contribute to the sustainable development of the industry through addressing the challenges identified.

1.2 Aim and Objectives

As outlined above, EMs are facing numerous changes within their macroeconomic environment which have created both opportunities and challenges for businesses. Our study focuses on India which is experiencing the majority of these changes within the macroeconomic environment such as increased population, urbanization, fast economic growth, rising incomes and changing demographics. However, the same macroeconomic developments have caused significant challenges within the country such as intensified resource competition, pollution and income inequalities profoundly affecting the BoP in particular. Businesses are then increasingly becoming aware of their responsibility to the society and are therefore adopting SMBs to address the challenges arising from macroeconomic developments.

Our research aims to identify macroeconomic trends experienced in India using a PESTEL framework to analyze the political, economic, social, technological, environment and legal developments specifically focusing on the dairy industry. Based on the analysis, we will identify both the opportunities and challenges emanating from macroeconomic trends and, the impact on the BoP. Our study will then identify how businesses are using or adopting SBMs to address both the opportunities and challenges faced with a special focus on the BoP.

Therefore, the primary objective of this research is to understand macroeconomic trends, the challenges and opportunities arising and the adoption of SBMs by the businesses to address the above, with a special focus on the BoP. More specifically, the primary research question is: ***“How are macroeconomic trends influencing the adoption and use of sustainable business models to address the challenges faced by the Bottom of the Pyramid within the supply chain in Emerging Markets?”***

Accordingly, this research is structured based on the following main objectives:

- To understand macroeconomic trends through the PESTEL framework within the EMs, specifically on the Indian dairy industry.
- To develop an understanding of how the trends are influencing the adoption of SBMs by businesses within the Indian dairy industry to address the challenges faced by the BoP as ‘producers’ or ‘suppliers’ within the supply chain.

- A comparative evaluation between the literature review findings and the empirical outcomes of the research findings.

1.3 Research Limitations

We identify two main limitations in relation to the scope of this thesis. Firstly, SBMs incorporate three main aspects; the economic, social and environment value forms. However, our research focuses only on the social and environmental aspects of the SBMs as we consider the social and environmental aspects of the SBMs as the most useful for addressing the challenges of the BoP while the economic aspect is most applicable for the economic success and profitability of the business. Secondly, our study covers only one EM, India. However, since case studies can be generalizable and transferable through analytic generalization (Yin, 2003), we think that our study can have much wider applicability to other EMs as there are major similarities within macroeconomic environment and trends in these markets.

1.4 Outline of the Thesis

This thesis is divided into six chapters, first is the introduction, which serves as a background setting, providing an overview of the macroeconomic environment in EMs, the challenges for the BoP and the adoption of SBMs. The first chapter also introduces India, as the EM in focus for our study and provides an overview of the Indian dairy industry. The second chapter is the literature review which provides a comprehensive overview of the theoretical framework that includes the business environment focusing on macroeconomic environment, PESTEL analysis, EMs, BoP and adoption of SBMs. Building on this, the third chapter discusses the methodology by explaining the research approach and design. The fourth chapter discusses the empirical research findings while analysis and discussion on macroeconomic trends, use of SBMs and BoP are in the fifth chapter. Lastly in the sixth chapter, conclusion is made by discussing the practical and theoretical implications of the study and the areas for further research are suggested.

2 Literature Review

2.1 Introduction

This chapter is a comprehensive theoretical review that identifies and evaluates previous research conducted on the use of SBMs in EMs and the influence of the business macroeconomic environment in shaping the use of SBMs. We first identify the literature on business environment and how this shapes strategic management for firms. Then we look at a specific context, EMs, major PESTEL trends in the EMs, BoP and how macroeconomic trends are driving the adoption and use of SBMs. The purpose of this literature review is providing the fundamental context for the thesis project to be able to highlight the gaps in previous research and thus further refine the topic (Easterby-Smith, Thorpe, and Jackson, 2015)

2.2 Business Environment and Strategic Management

To achieve and sustain business success, it is crucial to fully understand both the internal and external competitive environment of the firm as it shapes its strategic direction. Grant (2016) argues that the firm and the industry environment represent the two main components of the strategy analysis framework. The firm, as an internal environment, embodies the goals and values, resources and capabilities, and structure and systems. The industry, as an external environment, embodies the competitors, customers and suppliers. Grant (2016) emphasizes on the importance of the strategy as the link between the firm and the industry environment that determines the firm's success. Porter (2008a) also affirms that a firm's competitive strategy is influenced by both internal and external factors to the firm. To facilitate the strategic direction of the firm, it is argued that an external analysis of the environment should be done through the Porter's five forces model by identifying the threat of entry barriers, the threat of substitute products or services, rivalry among existing competition, bargaining power of buyers and bargaining power of suppliers (Porter, 2008a). Therefore, it is necessary for firms to analyze the industry attractiveness, competition and profitability, usually done through a SWOT analysis by looking at both the industry and the macroeconomic environment.

Evidently, the macroeconomic environment influences the nature of any industry and therefore shapes the firm's competitive strategy. Porter (2008b) argues that an evaluation of the environmental fit is vital in designing the competitive strategy of a firm. This means that it is important to determine the degree to which the firm's goals and policies are exploiting the industry opportunities, the extent to which they deal with the industry threats if the timing reflects the ability of the environment to absorb actions and if they are responsive to broader societal concerns. Additionally, Feurer & Kazem (1995) claim that the first step in a strategic planning process is the analysis of the environmental conditions through looking at the political, economic, social and technical factors and analyzing the trends in the nation, the community and the world. Hence, a thorough and comprehensive analysis of the macroeconomic environment is useful in the strategic management of firms.

2.3 Emerging Markets (EMs)

'Emerging Markets' are currently considered as the most promising markets for conducting business for many competitive companies. The term 'Emerging Market' has been frequently used among scholars, media, multinationals, investment funds and others to describe various countries. However, there is no common definition of an 'Emerging Market' and the countries' classification of these markets still continues to differ. The term was introduced by the International Finance Corporation economist Antoine van Agtmael in 1981 to describe countries with stock-markets that are potential for rapid growth with investments (Piyush et al, 2018). Early scholars categorized markets based on simple criteria, while subsequent ones have developed more complex criteria to differentiate countries (Piyush et al, 2018). Khanna & Palepu (1997), for example, use the analysts' definition of EMs that depends on simple characteristics of the market such as size, growth rate or the extent to which the country is open to the global economy. However, other scholars claim that to differentiate countries, it is important to determine a range of complex typologies with both micro and macro variables (Piyush et al, 2018). Sakarya et al (2007), for instance, argue that the level of economic development reflected by the gross domestic product (GDP), the balance of agrarian and commercial activity, the economic growth rate, the system of market governance and the extent and stability of a free market system should be the criteria used to classify markets as emerging. However, some common observations are that EMs are characterized by rapid urbanization, industrialization and increased demand for products and services placing intense pressure on the ecological and social systems (Hart & Milstein, 1999). Currently, EMs are seen to provide

numerous business opportunities as well as challenges for multinational companies and are a driving force towards the adoption of SBMs as firms try to fulfil the demand for goods and services.

2.3.1 Emerging Markets Macroeconomic Environment and PESTEL Analysis

To evaluate the external business environment in EMs, one of the most popular tools is the PESTEL framework in which factors influencing an industry are grouped into six categories: **Political, Economic, Social, Technological, Environmental and Legal** factors. For most industries, the attractiveness and profitability are determined by the existing macroeconomic environment through factors such as general economic trends, changes in demographic structure, the social and political trends. These factors are important for the strategic analysis as they may be critical determinants of the threats and opportunities a firm will face in future (Grant, 2016). Therefore, the main purpose of macroeconomic analysis is to enable managers to analyze the trends in the external environment and extract and examine the implications and consequences on strategy development and decision making to improve the survival and growth potential (Akhter, 2015). In recent years, most of the EMs have been experiencing major changes within their macroeconomic environment which has affected the competitiveness of the various industries operating within these markets.

2.3.1.1 Political Factors

Political analysis deals with the regulatory environment in which businesses operate and the extent to which government intervenes in the economy. The government is responsible for regulating industries, facilitating the conduct of business, setting the business standards and protecting customers for example, the government can raise tariffs to protect local industries and give subsidies to businesses to promote global competition (Akhter, 2015). Thus, businesses should remain aware of the developments in policies or changes in government regimes as this will impact on their business activities. Arnold & Quelch (1998) argue that the national and the local governments and other regulatory bodies in EMs are more influential in the market systems in comparison with the developed markets. Additionally, the rise in state capitalism in the EMs such as China, India and Brazil have distorted the working of the free markets because the governments use such tactics to ensure they do not lose their political power (Bremmer, 2014).

2.3.1.2 Economic Factors

The trends in the economic environment have a direct impact on business strategy and profitability. Economic analysis usually examines how factors such as economic growth rate of the economy, unemployment, income distribution, inflation, tax and interest rates influence the purchasing power of consumers (Akhter, 2015). For example, a higher growth rate in country's economy can lead to rising incomes which translate to higher purchasing power for consumers. Hart & Milstein (1999) identify high growth rate of manufacturing and rapid industrialization as some of the factors contributing to fast economic growth in EMs.

2.3.1.3 Social Factors

Social analysis, also known as socio-cultural analysis, scrutinizes the social environment of the market as it entails looking at the developments in the demographics, values, attitudes and lifestyles such as looking at how the population growth rate is changing, the rate of urbanization and how people consume or spend their time (Akhter, 2015). The social factors are of interest for industries in predicting demand patterns based on understanding the consumer behavior. Firms view EMs as having long term market potential based on their high population growth rates (Arnold & Quelch, 1998).

2.3.1.4 Technological Factors

Recent technological developments have transformed people's lives and changed most businesses operations. The main purpose of analyzing technological factors is to help businesses understand how the technological developments and innovation are creating opportunities and threats in the marketplace. Akhter (2015) argues that technological developments have a significant impact on the value chain process, for example innovation in communication has improved online businesses and transformed distribution systems for goods and services. EMs have facilitated both the development and the adoption of leapfrogging technologies and encouraged reverse innovation whereby innovation is first adopted in these markets (Arnold & Quelch, 1998; Govindarajan & Ramamurti, 2011).

2.3.1.5 Environmental Factors

There has been an increased push for environmental sustainability in recent years partly driven by the concerns on the environmental impact of the increasing economic activity around the

world. The analysis of environmental factors relates to the effect of ecological and environmental aspects on the demand and how this shapes the way the business is being done. Also, it includes all the factors that determined by the surrounding environment (Rastogi & Trivedi, 2016). EMs are facing the most intense pressure on their ecological systems due to growing demand for goods and services, resulting in large scale air and water pollution that jeopardizes public health (Hart & Milstein, 1999). The World Health Organization (2017) reports that air pollution is the most pressing environmental threat to health and that in South-East Asia Region whereby some of the EMs such as China and India are, the air pollution is more than WHO guidelines.

2.3.1.6 Legal Factors

The main purpose of rules and restrictions is to protect both the businesses and the consumers. Therefore, regulations, policies and legislature have a great impact on the organization functions and consequently have cost implications. The analysis of legal factors relates then to how the regulations, laws and legislation influence and affect the way the business operates and should take into consideration all the legal aspects such as taxation, resources, quotas, etc. (Rastogi & Trivedi, 2016). However, as certain laws affect the business environment and certain policies are only affecting the business itself, the legal analysis should deal with both angles (Rastogi & Trivedi, 2016).

PESTEL Factors	Examples
Political	Government type, stability, employment and social legislation, tax policy, trade controls, corruption.
Economic	Rate of unemployment, inflation rate, tax rate, Interest rates, growth rate of the economy, income distribution.
Social	Population growth rate, health consciousness, age distribution, equality, religion, literacy rate, lifestyles choices, family size

Technological	Basic infrastructure level, degree of automation, R&D spending, rate of technological obsolescence
Environmental	Climate change, natural disasters, weather, waste management, recycling
Legal	Consumer law, employment law, discrimination law, health and safety, data protection

Table 1 PESTEL Factors Examples

2.3.2 Opportunities in Emerging Markets

There are several business opportunities that exist when operating in EMs. Businesses can simultaneously pursue goals through generating profits while at the same time solving social problems. According to Prahalad & Hart (1999), EMs provide a market opportunity not just for the wealthy few in developing world but also the vast number of the aspiring poor joining the market for the first time. EMs normally have large populations, resource bases, markets and are regional powerhouses which positively influence the demographic and spending patterns for consumers hence providing incentives for companies to establish operations (Sakarya et al, 2007).

Sheth (2011) identifies three comparative advantages that provide business opportunities in EMs:

1. Policy based comparative advantage - the governments in EMs such as China and India have initialized economic reforms and strong industrial policies which have transformed the markets boosting investments.
2. Raw materials based comparative advantage - EMs have variety of abundant resources such as human capital especially in India, industrial raw materials, energy and other natural resources in addition to access to capital and technology.
3. NGO based comparative advantage - NGOs operating in EMs have new and non-traditional business practices that are balancing business practices with social purposes

such as inclusive marketing and public-private partnerships done by Grameen Bank in Indonesia and Amul Dairy Cooperative in India.

2.3.3 Challenges in Emerging Markets

As much as there are business opportunities in EMs, several challenges are faced by businesses operating in these markets. As these markets are comprised by both the top and the bottom of the pyramid, there is a need for multinational companies to fulfil the demands of the entire economic pyramid by having the global capability and market entry strategies that move past reliance on imported business models which normally just extract knowledge while protecting and controlling flow of resources (London & Hart, 2004). Moreover, the living standards and income levels are rising in the EMs leading to a rise in consumption levels which has helped diminish the differences between the developed countries consumers and the emerging countries (Piyush et al, 2018). Consequently, the rising consumption due to improved purchasing power has caused new challenges for EMs in avoiding the collision between rapidly growing demand and the stable or diminishing stock of material supply (Hart & Milstein, 1999). Companies should therefore, aim at eliminating wasteful and outdated practices through the identification of sustainable driven opportunities. Hence, there is a strong need for companies to adopt the right business models for the EMs.

Bremmer (2014) also argues that current political developments represent challenges in EMs especially due to the rise of state capitalism and with the governments of developing nations becoming more protective of the local interests. Consequently, it is becoming more difficult for international companies to enter these EMs. Khanna et al (2005), further identify other challenges experienced by multinationals in EMs such as the lack of reliable information on customers, inadequate skilled workers as talent is hard to ascertain and the lack of sophisticated capital and financial markets. Other challenges causing majority of the markets failures in EMs are caused by information problems, misguided regulations whereby regulators place political goals over economic efficiency and inefficient judicial systems (Khanna & Palepu, 1997). It is therefore, increasingly important for managers to be aware of these challenges so they can choose the right strategies and business models for operating in these markets.

To choose the right business models and strategies, Hart & Milstein (1999) identify the key questions to be considered by managers for these markets and they include asking:

1. Is it environmentally feasible to double or triple the size of our industry?
2. What factors prevent our industry from such growth?
3. Can we meet growing consumer needs without depleting the natural systems on which we depend?
4. Can we use emerging economies to develop "leapfrog" technologies?
5. How can we meet growing needs without exacerbating urban problems?

Businesses therefore must develop new strategies for engaging across their value chains in EMs to remain competitive in the long run through understanding each nation's institutional context consisting of the country's product, capital and labor markets and its regulatory system (Khanna & Palepu, 1997; Khanna et al, 2005).

2.3.4 Bottom of the Pyramid (BoP)

One of the key characteristics in EMs is the significant proportion of 'below the poverty line' population, known as 'the bottom of the pyramid'. To address the challenges faced by this class of the economic pyramid, there is a strong need for the adoption of SBMs suitable for EMs. In global terms, the bottom of the pyramid, that is the poorest socio-economic group, accounts for more than 4 billion people that live on less than 2 dollars a day (Prahalad & Hart, 1999). In emerging economies, such as China and India, the BoP controls a significant portion of the national income and therefore provide a vast and untapped market for businesses, both local and multinationals. To benefit from BoP market, businesses must seek moral and ethical legitimacy through initiatives aimed at improving corporate behavior and boosting consumer acceptance (Hammond & Prahalad, 2004).

Local and international companies and entrepreneurs are becoming increasingly attracted to the bottom of the pyramid market. The BoP is seen not only as a way for companies to bring prosperity to the poor by alleviating poverty, but also a mean for them to convert the segment's purchasing power into profits (Hammond & Prahalad, 2004; Pitta et al, 2008). Having both resources and persistence, investments at the bottom of the pyramid market provide an opportunity for companies to grow, make profits and contribute to mankind by lifting billions out of poverty, averting social decay, political chaos, terrorism and environmental meltdown (Prahalad & Hart, 2002).

Successful strategies for firms operating in the base of the pyramid involve moving beyond the transnational business model through collaboration with non-traditional partners, understanding the social context, co-inventing custom solutions by building from the bottom-up and building local capacity through sharing resources across boundaries (London & Hart, 2004). However, companies can sometimes be reluctant to invest in the BoP markets as they assume that low income people spend less on goods and services and fear that barriers such as corruption, illiteracy, inadequate infrastructure, currency fluctuations, tribal, racial and religious tensions as well as bureaucratic red tape would hinder the ability to conduct business and make profits (Prahalad & Hammond 2002, 2004).

As concern for BoP and the environment continues to grow, companies are increasingly changing their approaches especially in the emerging markets, whereby the environment presents challenges and opportunities different from the developed markets. By adopting sustainable development in their strategies, the use of SMBs to create social and environmental value is increasingly becoming important.

2.4 Sustainability

The need for business sustainability and the importance of the integration of economic, social and environmental issues has gained a growing interest among scholars, governments and other stakeholders. Brundtland (1987, p.37) defines sustainable development as a ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’

Currently, there are many challenges that inhibit sustainable development including poverty, rising inequalities within and among countries, gender inequality, unemployment, natural resources depletion, environmental degradation and climate change which have put the survival of many societies and the biological support systems of the planet at risk (United Nations, General Assembly, 2015). As a response to address these challenges, the United Nations in September 2015 adopted the Sustainable Development Goals aimed at achieving more inclusive and sustainable growth of the world. These goals have gained the support of many stakeholders including both public and private sector with initiatives being undertaken to help achieve the goals.

Several authors have identified various drivers for adoption of sustainable development by businesses. Hart & Milstein (2003) argue that both the internal and external environment are pushing businesses towards global sustainability and identifies four main causes which are:

1. Increased industrialization and its associated material consumption, pollution and waste generation resulting in a strong need for resource efficiency and pollution prevention.
2. Proliferation and interconnection of civil society stakeholders fuelled by the spread of internet thus challenging firms to operate in a transparent, responsive manner due to a well-informed and active stakeholder base.
3. Emerging technologies that provide potent, disruptive solutions through innovation and technological change.
4. Increase in population, poverty and income inequality associated with globalization resulting in the need for social development and wealth creation on a massive scale.

Similarly, Lubin & Esty (2010) identify sustainability as an emerging megatrend driven by environmental issues, competition for natural resources, and public and governmental concern about climate change, requiring businesses to reconsider sustainability as a strategic issue approach. Companies and businesses are increasingly blamed for society's failures as they are the principal cause of the social, environmental and economic problems and hence, there is a call for change from the traditional mindset of corporate social responsibility to the principle of shared value (Porter & Kramer, 2011).

With the sustainability challenges mentioned above, governments, global organizations such as the UN, the academia, the society, and other stakeholders are putting pressure on businesses to adopt clear and practical approaches to become more sustainable. Several scholars have identified reasons for businesses to become sustainable and they have established the link between profitability, the society, and long-term business sustainability. Hart & Milstein (1999) argue that global sustainability is a catalyst for creative destruction, hence the need for corporations to seize the opportunity for sustainable development by looking beyond continuous and incremental improvements.

Businesses, then have the responsibility and obligation to develop sustainable strategies that address all the interests of all stakeholders including investors, employees, customers, governments, NGOs and society (Eccles & Serafeim, 2003). According to Nidumolu et al. (2009), the quest for sustainability is already transforming the competitive landscape which will force companies to change the way they think about products, technologies, processes and business models especially through innovation. Nidumolu et al. (2009), outlines the five stages companies go through to tackle sustainability challenges and they are:

1. Stage 1: Viewing compliance as opportunity whereby compliance with the norms should provide an opportunity for innovation, for example by experimenting with sustainable technologies, materials and processes.
2. Stage 2 - Making value chains sustainable through increased efficiencies within the supply chain, operations and the waste reduction through the reuse of product returns.
3. Stage 3 - Designing sustainable products and services to become eco-friendlier.
4. Stage 4 - Developing of new business models by finding ways of delivering and capturing value to change the basis of competition.
5. Stage 5 - Creating next-practice platforms by questioning the dominant logic behind business today.

Businesses should focus on sustainability to create value through; outperforming competitors on regulatory compliance and environmental-related cost and risk management, redesigning of products, processes and whole systems to optimize natural resource efficiency across the value chain, transforming the core businesses through sustainability innovation and through new business model creation and differentiation (Lubin & Esty, 2010). Similarly, Michelini (2012) argues that businesses are assessing their current business models in low income markets to create new business opportunities for addressing global challenges while simultaneously generating profits. Hence, a reassessment and redesign of strategies and business models is necessary for companies to become more economically sustainable.

2.5 Sustainable Business Models

A business model can be defined as a conceptual tool that aims to express and describe the business rationale of a specific firm (Osterwalder, Pigneur, & Tucci, 2005). A successful business model consists of four elements; customer value proposition, profit formula, key

resources and key processes (Johnson et al, 2008). Recently, business models have gained a massive use in practice as they are directly related to securing and maintaining competitive advantage (Johnson, 2008). The dominant firm model draws on the stakeholder theory that views the organization's primary goal as maximizing profits and creating economic value (Freeman, 2010), while the social and environmental goals are secondary obligations (Stubbs, & Cocklin, 2008). However, this paradigm then disregards the ability of firms to address social and environmental issues. Subsequently, new business models describing firms as being more than just economic entities have emerged (Dopplet, 2003).

The traditional capitalist system is being challenged, by a variety of issues which are encouraging the adoption of SBMs among firms. Helping organizations to address the complex social and ecological issues has gained the interest of many scholars and researchers. The European Corporate Sustainability Framework, for example, is a conceptual framework, combining theories and models, that was developed by an Erasmus University to enlighten the sustainability issues to help with the implementation of the corporate sustainability in organizations (Hardjono & Klein, 2004). This framework suggests that the neoclassical model should be supplemented by the social and environmental obligations. Another perspective, shown in the exhaustive phase model developed by Benn et al (2006), suggests that the neoclassical model should be not only be supplemented by the sustainability issues but rather completely transformed. This model is then helping organizations understand the transfer from the compliance phase to the strategic sustainability phase.

SBMs are business models that create competitive advantage through superior customer value while contributing to the sustainable development of the company and the society (Ludeke-Freund, 2010). Stubbs & Cocklin (2008, p.113) state 'An SBM requires that organizations treat sustainability as a business strategy in itself, rather than as an add-on.' Therefore, SBMs usually incorporate three factors for business sustainability; the economic, environmental and social value forms known as the triple bottom line (Hart & Milstein 2003; Willard 2012). Stubbs & Cocklin (2008) identify the following characteristics of SBMs:

1. SBMs draw on the economic, environmental and social aspects of sustainability in defining the organization's purpose.

2. SBMs consider all the stakeholders needs rather than giving priority to shareholders' expectations. The success of the business is linked to all stakeholders inclusive of the local community, suppliers, employees and customers.
3. SBMs use the triple bottom line in measuring performance hence the sustainability mindset is embedded within the organization.
4. SBMs treat nature as a stakeholder and promotes environmental stewardship through use of renewable resources, technological innovation to minimize waste and pollution and reduced consumption.
5. SBMs comprise of both the systems perspective and the firm-level perspective whereby firms develop internal and structural capabilities to achieve firm level sustainability.
6. SBMs have the support of sustainability leaders who drive the cultural and structural changes necessary to implement sustainability.

The factors above are useful in evaluating whether the business models adopted by businesses or within the industry are sustainable. Boons et al (2013) argues that SBMs have the potential to bridge the gap between radical and systemic sustainable innovation and firm strategies, including the issue of economic performance. Hence, the adoption of SBMs by companies helps them accomplish greater roles expected of them as institutions by the society. The institutional logic holds that companies are more than instruments for generating money, they should help accomplish societal purposes and provide livelihoods to their employees through a common purpose, a long-term focus, emotional engagement, partnering with the public innovation and self-organization (Kanter, 2011).

Additionally, the adoption of United Nations Sustainable Development Goals (UN SDGs), have encouraged multinational companies to adopt SBMs to facilitate the achievement of SDGs. Unilever, for example, has adopted a sustainable business model through the 'Unilever Sustainable Living Plan' whereby it aims to improve health and well-being of people, reduce environmental impact and enhance livelihoods (Unilever, 2018).

SBMs elements are built on from the original elements of the business model. A business model is comprised of three main elements: the value proposition, value creation and the value capture (Richardson, 2008). SBMs must rethink these three elements because of the concerns on the ecological sustainability such as the population growth, pollution and consumption rate of

renewable and non-renewable resources (Ludeke-Freund, 2010). Therefore, SBMs require a holistic view of the value proposition, creation and capture that includes benefits and costs for other stakeholders specifically the society and the environment (Bocken et al, 2013).

2.5.1 Value Proposition

According to Richardson (2008), value proposition entails what a firm delivers to its customers, what they will be willing to pay to it and the firm's approach to competitive advantage, therefore it is comprised of the offering, target customer and strategy for competitive advantage. For SBMs, value proposition is provided through measurable ecological and/or social value together with economic value by incorporating both the interests of the business and the society (Boons & Ludeke-Freund, 2013). Businesses should aim at profitably providing goods or services to customers that have social and environmental value. For example, the Nano, a cheap but safe car was developed for the Indian market through the initiative of Ratan Tata of the Tata Group as an alternative form of transport for scooter families while at the same time the company generated profits through high volume sales (Johnson et al, 2008).

2.5.2 Value Creation and Delivery System

Value creation and the delivery system entails how a firm creates and delivers value to its customers. It comprises of the resources and capabilities, the value chain, activity system and business process and position in the value network that links to suppliers, partners and customers thereby creating a source of competitive advantage (Richardson, 2008). In SBMs, value creation and delivery are done through the creation of societal benefits such as secure livelihoods and environmental benefits through activities, channels and partners.

2.5.3 Value Capture

Value capture entails how the firm generates revenue and profit, consisting of the revenues sources and the economics of the business (Richardson, 2008). An SBM financial model should distribute economic costs and benefits equitably among the actors involved (Schaltegger et al, 2016).

2.6 Corporate Social Responsibility, Creating Shared Value and SBMs

How is the sustainable business model concept similar or different from the concepts of corporate social responsibility and creating shared value? Werther & Chandler (2010) define CSR as ‘a view of the corporation and its role in the society that assumes a responsibility among firms to pursue goals in addition to profit maximization and a responsibility among a firm’s stakeholders to hold the firm accountable for its actions.’

Werther & Chandler (2010) argue that CSR is critical and controversial for firms. It is critical as a key component for business strategy to gain a comparative advantage over other firms while it is controversial since as economist Milton Friedman argued the ‘social responsibility of business is to increase its profits’ therefore firms should focus on only maximizing financial success. The economic argument for CSR holds that CSR adds value by allowing companies to reflect the needs and concerns of the various stakeholder groups to retain social legitimacy and maximize financial viability (Werther & Chandler, 2010). This economic argument can be linked to the use of SBMs as they focus on delivering superior value through looking at the economic, social and environmental aspects of a business.

Similarly, the shared value concept focuses on the connection between societal and economic progress whereby businesses are expected to create economic value in a way that also creates value for the society by addressing its need and challenges (Porter & Kramer, 2011). Pfitzer et al (2013), argues that businesses should create profitable social enterprises through embedding a social purpose, rigorously defining the social need, measuring the social and business value, creating the optimal innovation structure and co-creation with external stakeholders. Similarly, Porter & Kramer (2011), identify three ways of creating shared value which include reconceiving products and markets, redefining productivity in the value chain and enabling local cluster development. The ‘shared value concept’ has gained the popularity and the support of many businesses with some multinationals companies successfully embedding the concept within their strategy. Unilever, P&G, Dow and Nestle are among the companies that have been able to create successful models for delivering both social benefits and business value. Hindustan Unilever, for instance is creating shared value through reconfiguration of their

distribution systems whereby the company introduced a new direct to home distribution system called ‘Project Shakti’ run by underprivileged female entrepreneurs in the Indian villages thereby empowering women, reducing spread of communicable diseases while generating about 5% of Unilever’s total revenues in India (Porter & Kramer, 2011).

It can be concluded that CSR and creating shared value embed the SBMs as they all focus on economic, social and environmental aspects of a business. However, CSR is not seen as enough for sustainable development. Environmental forces which include the rising affluence both in the developed and developing nations, ecological sustainability, globalization free flow of information and brands have increased the pressure for businesses to adopt strategic CSR (Werther & Chandler, 2010). As businesses have a greater role to play in tackling the new challenges, there is pressure to move towards strategic CSR and creating shared value, which we argue, leads to the use and adoption of SBMs.

2.7 Theoretical Framework

Based on the literature review, businesses are gradually adopting and using SBMs to address the challenges and opportunities emanating from the current macroeconomic trends in EMs. Businesses are adopting institutional roles in which they not only seek to optimize financial returns but aim to address the interests of other stakeholders especially the society and the environment. We also argue that businesses can embed SBMs using strategic CSR and creating shared value as they all integrate the economic, social and environmental aspects of the businesses. Our suggested theoretical framework is summarized below and comprises of the factors that we identified in emerging markets which include macroeconomic trends, challenges and opportunities, SBMs, BoP, strategic CSR and creating shared value.

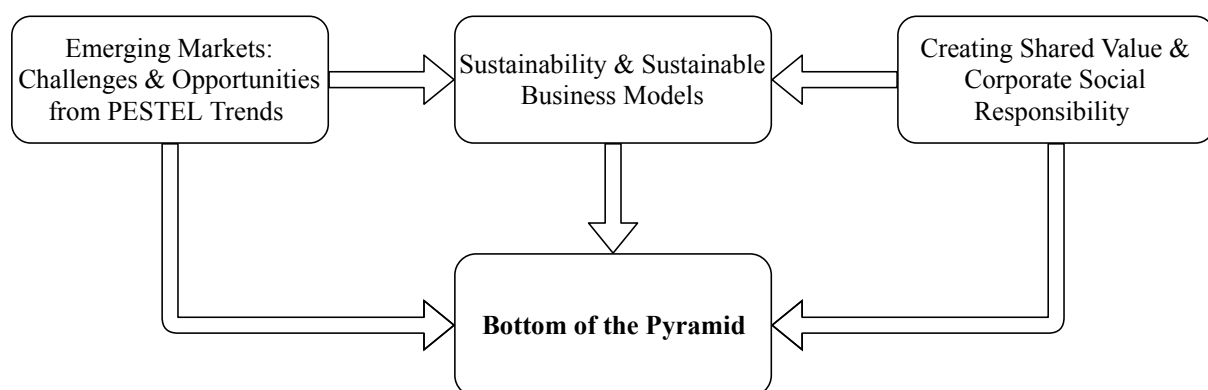


Figure 3 Theoretical Framework Summary

2.8 Chapter Summary

As the world's demography and economic power continues to shift, EMs are becoming very attractive markets for both local and international businesses and investors. However, these markets present opportunities and challenges for businesses, therefore strategic management is crucial for firm's success through the internal and external analysis of the business environment to facilitate the choice of the competitive strategy. EMs are coupled with changes within their macroeconomic environment hence the need for businesses to proactively analyze the trends and realign their strategies accordingly to remain competitive.

In the literature review, we have outlined macroeconomic changes that are facing the EMs and the resulting opportunities and challenges for businesses. Some of the trends experienced in EMs such as China and India are the rapid economic growth characterized by increased urbanization, rapid population growth, massive industrialization and rising incomes. Macroeconomic forces in EMs vary from political, economic, social, technological, environmental to legal. However, not all the trends are positive, as a new set of challenges has emerged in the EMs. Social and environmental problems have risen due to the rapid growth therefore increasing consumption levels that have strained the world's resources. Also, the massive industrialization has resulted in increased levels of pollution endangering people's lives and the economic growth has resulted in increased income inequalities, with the poor getting poorer. Subsequently, businesses are becoming aware of the opportunities that the BoP provide for sustainable and inclusive growth using SBMs. The literature review also summarizes the opportunities and challenges faced by businesses in EMs that have caused businesses to rethink their strategies. In addition, businesses are faced by increased pressure from the governments, intergovernmental organizations and the society to be more sustainable and socially responsible. This has caused businesses to integrate sustainable development to the core of their businesses by adopting SBMs that seek to deliver economic, social and environmental value for all the stakeholders of the businesses ranging from the shareholders, suppliers, customers and the society.

3 Methodology

The purpose of this chapter is to explain the research methods used in answering our research question and describe how the data was collected and analyzed. Our research utilizes a qualitative approach using two case companies from the Indian dairy industry supported by primary and secondary data collection. Our study is focused on understanding the macroeconomic environment of the Indian dairy industry as an EM and its implication for the use of SBMs to address the challenges faced by the BoP. This chapter gives a detailed explanation of the research approach and design and the implications for validity and reliability.

3.1 Research Approach

The main purpose of our research is to contribute to the knowledge on the use and adoption of SBMs in EMs to address the challenges faced by the BoP because of the trends within the macroeconomic environment. This study looks at how the concept of SBMs is used by businesses to create social and environmental value by responding to the challenges caused by changes and trends within the macroeconomic environment. Our study focuses on India as an EM with a specific focus on its dairy industry.

This research uses a qualitative approach as the main objective is to conduct an in-depth study to produce new insights by analyzing qualitative data mainly from primary and secondary sources (Yin, 2011). The choice of the research approach is mainly restricted by the philosophical assumptions brought to the study, the procedure of inquiry, and specific methods used for data collection, analysis and interpretation (Creswell, 2014). Therefore, the process of our study involves emerging research questions, data collection from different sources, data analysis and interpretation of the collected data. For this qualitative research, we used both inductive and deductive approaches. The deductive method is mainly used in the theoretical part; whereas, the inductive approach is followed in the empirical part of the study.

3.2 Research Design

Research design deals with the organization of the research activity and appropriate data collection method to achieve the research aims (Easterby-Smith, Thorpe & Jackson, 2015). As this thesis primarily focuses on SBMs in EMs, we found it appropriate to conduct a multiple

case study embedded in the Indian context in order to be able to scrutinize each of the units of analysis chosen and at the same time be able to compare them for generalization matters.

As outlined above, our study uses a qualitative approach through a case study of the Indian dairy industry. A case study is a research method that essentially looks in depth at one of few events, organizations or individuals (Easterby-Smith, Thorpe & Jackson, 2015). Case studies can be useful in obtaining in-depth information, highlighting the uniqueness of each unit of analysis and enabling comparisons (Bryman & Bell, 2015). Moreover, case studies are rich as the empirical descriptions are collected from a variety of data sources, including archival data, interviews, survey data and observations (Eisenhardt & Graebner, 2007). On the other hand, in the management field, case studies as theory-building methods are not much advocated as they usually do not allow generalizations, lack the rigor of scientific designs and produce a lot of data that can be interpreted in various ways (Easterby-Smith, Thorpe & Jackson, 2015).

To be more specific at highlighting the adoption of SBMs in EMs, this study focuses on two companies as the main units of analysis. Our selection of companies was based on identifying one major national player and one smaller regional player in the Indian dairy industry to compare the adoption of SBMs between the two. The two companies selected were Amul and Vijaya Dairy. Amul, is a dairy cooperative based in Anand, Gujarat considered to be the largest dairy company in India. Vijaya Dairy, on the other hand, is a government-owned dairy company based in Hyderabad, Telangana and one of the most popular milk brands in Telangana state. As dairy cooperatives are the most used models in India, the use of the two companies allows us to investigate the common and different aspects of the use of the SMBs in each context and thus being able to generalize the findings to a broader context. However, due to the size difference between the two companies, more information was available on Amul; which had a considerable impact on our research.

3.3 Data Collection Method and Analysis

To be able to provide considerable empirical contribution and practical insights on the adoption of SBMS in EMs, the research has used both primary and secondary data. Primary data was used for the empirical chapter while secondary data was used for the literature review and part of the empirical research findings and analysis. For the literature review, we identified relevant

academic journals using sources such as LUBsearch and Google Scholar that enabled us to gain understanding of the theoretical concepts applicable to the analysis of macroeconomic environment in EMs and use of SBMs. Qualitative research relies extensively on interviews and other sources such as archival data, historical books and observations (Eisenhardt & Graebner, 2007).

To analyze the existing macroeconomic environment and PESTEL trends in India, an extensive search for information was carried out using the internet. Most of the data was drawn from reports released by the Government of India, intergovernmental organizations such as the UN, World Bank, OECD and IMF and market research institutions such as EuroMonitor. Moreover, to gain an understanding of our case companies, we scanned data from the company websites, annual reports and press releases. The advantages of using secondary data is that it can be of high quality especially when published by firms and governments and help open historical perspectives to a given study (Easterby-Smith, Thorpe & Jackson, 2015). However, it is recognized that the data collected from secondary sources might compromise on the internal validity of the research findings (Bhattacharjee, 2012).

To go beyond what is covered in secondary sources, develop a holistic understanding of our topic and mitigate the cultural differences problem, we visited the two case companies in India. We conducted a tour of the dairy plants, Vijaya Dairy in Hyderabad, Telangana and Amul in Anand, Gujarat. Through the visits, we were able to make observations on the case companies chosen and to conduct in-depth face-to-face interviews with experts within the dairy industry in India on-site; which has enriched our data and increased the validity of our research. Interviews are a highly efficient tool to collect rich empirical data. However, they are accused of being biased and subjective (Eisenhardt & Graebner, 2007). To mitigate this challenge and reduce potential biases, the selectivity of our interviewees was very important. Also, to have diverse perspectives, we relied on interviews with executives from different high hierarchical levels and functional areas as well as from different geographies. This procedure is used to limit the biases caused by impression management and retrospective sense-making, as it is less likely for a diverse sample of interviewees to represent the same biases (Eisenhardt & Graebner, 2007).

Our research was conducted using semi-structured interviews, whereby we used a topic guide and therefore had the opportunity to probe further on some of the questions depending on the type of responses. Also, to be able to obtain most of the information needed for our study, we sent an interview guide to some of the interviewees who had requested it a few days before the interviews to provide time for reflection and consideration concerning the questions.

The interviewees were selected using a snowballing sampling, which is a non-probability sampling design, whereby the selection is not based on a random selection method (Easterby-Smith, Thorpe & Jackson, 2015). As the study mainly scrutinizes the use of SBMs to address the challenges faced by the BoP due to the prevailing macroeconomic trends, the interviews targeted five senior managers at the case companies, Amul and Vijaya Dairy. Additionally, we also had three more interviews with people working outside the two dairy companies to gain a broader understanding of the Indian dairy industry and the macroeconomic environment. We conducted seven face-to-face interviews, with one exception, which was web based using Webex, all in English. The face-to face interviews were conducted in India. Our interviewees were:

Interviewee	Job Position	Company
Mr. Anil Bayati	Incharge General Manager	AmulFed Dairy, Ahmedabad, India
Mr. Nehit Vasavada	Senior Manager	AmulFed Dairy, Ahmedabad, India
Mr. S S Sundaran	Senior Executive of Public Relations	Amul Dairy, Anand, India
Mrs. K Nirmala	Managing Director	Vijaya Dairy, Hyderabad, India
Mr. Sandeep Kumar Sultania	IAS, Secretary to the Government	Animal Husbandry, Dairy Development and Fisheries Department, Telangana, India

Mr. Venkat Reddy	Deputy General Manager	Vijaya Dairy, Hyderabad, India
Mrs. Divya Allola Reddy	Klimom Founder	Sangareddy, Hyderabad, India
Mr. Dileep Chaturvedi	Customer Management and Business Development Manager	Tetra Pak, India

Table 2 List of Interviewees

Most of the interviews lasted between 30 minutes to 2 hours. We chose to reduce the number of our mediated interviews as they can lack contextualization and do not allow catching depth and nonverbal communication (Easterby-Smith, Thorpe & Jackson, 2015). Also, for accuracy and accessibility, the data collected through interviews was recorded on voice with prior agreements with our interviewees on the control over which parts to record. The main aim of our interviews was to find out how they used or adopted SBMs to tackle the challenges and opportunities caused by macroeconomic trends with a focus on the BoP. The recorded data was then transcribed for use in the analysis and discussion. Nevertheless, some of the interviews conducted were excluded in our research as the results were not relevant to our scope.

Dealing with the analysis and interpretation of highly complex information to build theory is one of the most common challenges that qualitative researchers face (Easterby-Smith, Thorpe & Jackson, 2015). Data analysis refers to the process of inspecting, transforming and framing data to be able to extract useful information (Easterby-Smith, Thorpe & Jackson, 2015). Our study adopted an iterative and continuing process. The preparation and organization of the data is an essential pre-step to facilitate the analytic process (Easterby-Smith, Thorpe & Jackson, 2015). For that, all the collected data was filed and organized in a consistent way making the retrieval easier. First, we categorized both the primary and secondary data collected based on our three main research areas, macroeconomic trends, SBMs and BoP. Then, to analyze the data, we further coded it into subsections as follows:

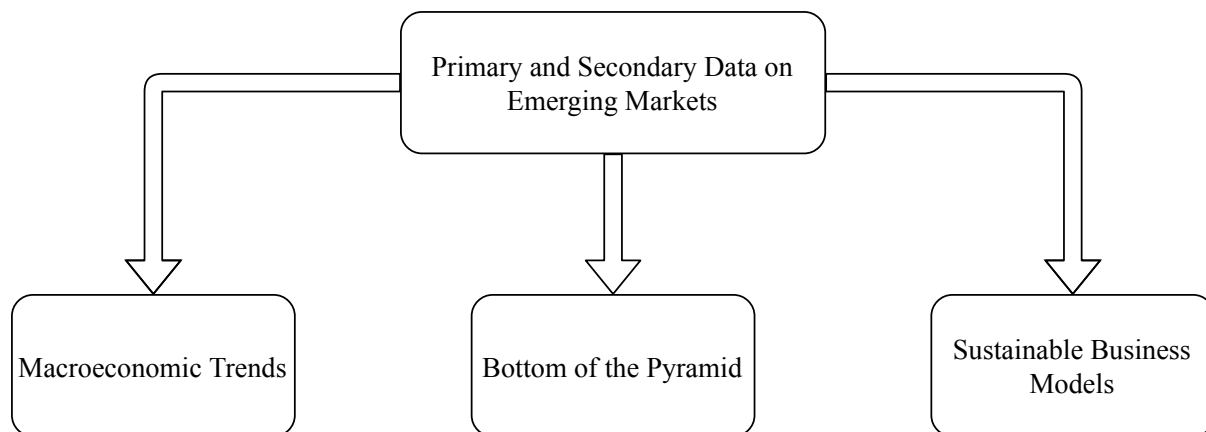


Figure 4 Data Analysis Categorization

3.4 Validity and Reliability

Considering the qualitative nature of the data and to enrich the trustworthiness of this thesis, several approaches have been utilized including persistent observation, thorough data collection, full engagement and reflexivity. Also, the triangulation process was one of the important mean to increase the accuracy of some information. Triangulation was achieved using secondary data and primary data consisting of interviews and observations. Triangulation is the process of using several sources for the same information to draw proper conclusions (Casey & Murphy, 2009).

As qualitative research involves interpretive, contextual and subjective data, in which the researcher is the sole instrument, asserting the rigor and quality of the whole process is crucial. Validity and reliability are two measurements used to reduce the bias and increase quality of the work. Validity deals with the integrity of the conclusions made from research, while reliability refers to the degree of the consistency of the construct (Bhattacharjee, 2012).

Ensuring validity and reliability was an ongoing concern during the whole process of our study. For that, we checked the trustworthiness of our secondary sources by limiting our research to reliable sources such as governmental, intergovernmental organizations and companies reports to get accurate and precise data, as well as using Google Scholar and EBSCOhost database to have access to peer-reviewed academic journals. Concerning the use of primary data, interviewees were chosen based on their position in the firms targeted as well as their knowledge and expertise in the field. All the interviewees were then credible and reliable sources to enhance the quality of our study.

3.5 Chapter Summary

To analyze the existing macro-economic environment and PESTEL trends in India, we chose to conduct a qualitative research using multiple case study approach to get in-depth insights and therefore be able to conclude on the implications of the trends on the adoption of SBMs in India to address the challenges faced by the BoP market. For that, primary and secondary data was collected, organized, analyzed and interpreted. At the same time, to reduce the biases and enhance the quality of our work, several precautions were taken including the high selectivity of our primary data sources and credibility of our secondary data sources.

4 Empirical Findings

This section presents the empirical findings starting with an overview of the Indian socio-economic status followed by an introduction of the global and the Indian dairy industry. Subsequently, an understanding of the macroeconomic setting of India in the context of the dairy industry is conducted, followed by a description of the two case companies, as well as the results of the interviews conducted.

4.1 India's Socio-Economic Context

India, situated in South Asia, is the seventh largest and the second most populated country in the world. With an estimated population of about 1.3 billion people, most of the Indian population is young (CIA, 2018). The Indian population is predicted to surpass the Chinese one by 2024 to become the world's most populated country (UN DESA, 2017). Both population and economic growth are expected to drive a large share of the global demand especially for agricultural commodities (OECD & FAO, 2017). India is constantly identified as an emerging market by analyst groups such as the IMF, FTSE, S&P, Dow Jones and MSCI. This is because India is among the fastest growing economies in the world with a projected growth in gross value added (GVA) of between 7.3% to 7.5% during the 2018-2020 period (World Bank, 2018a). However, India continues to have the largest number of poor people in the world, with approximately 270 million people living in extreme poverty (World Bank, 2016a). Besides, according to the World Bank (2016a), 1 in 5 Indians is poor. Besides, approximately 67% of the total Indian population still lives in rural areas and depends on rural incomes (World Bank, 2016b). However, the agricultural share in GDP has declined to about 14.5% as the country transforms from agrarian economy to an industry and service-based economy (IBEF, 2013).

India continues to face challenges that hinder its economic development and eradication of poverty. The challenges faced include slow export growth, tight regulation of the product and labor markets undermining business competition, air pollution resulting in mortality, gender disparities in women's economic participation, rising income inequalities and unbalanced economic growth among the Indian states (IMF, 2017). Also, the import tariffs in India remain high in comparison with other emerging markets, especially among food and agriculture, which

discourages exports and new investments needed to integrate India's exports into global value chains (IMF, 2017).

4.2 The Dairy Industry

4.2.1 Global Dairy Industry

According to OECD & FAO (2017), the dairy industry is the exception from the slowed growth in demand for most commodities during the period 2017-2026. The demand for fresh dairy products, driven by the higher per capita demand in developing countries, is expected to be higher than the past 10 years, with India being the most prominent due to increasing population and incomes and the shift in dietary patterns (OECD & FAO (2017). Consumer enthusiasm in developed countries for butter and dairy fat has experienced an increase, driven by factors such as more positive health assessments on dairy fat and the change in consumer perceptions towards taste and consumption of less processed food (OECD & FAO, 2017). Milk production is also expected to remain among the fastest growing in the agricultural sub-sectors especially in the developing country regions, with the highest rates of growth in sub-Saharan Africa and India (Muehlhoff et al, 2013). The Asia Pacific region is expected to represent over a third of the global market size of the dairy industry by 2021 (EuroMonitor, 2016).

However, there are several challenges that are currently being encountered in the international dairy supply chain. Some of the key issues include the decline in international prices for all dairy products mainly caused by the decrease in Chinese import demand coupled with production growth between 2014 and 2015 in the key export markets such as Australia, the EU, the US and New Zealand (OECD & FAO, 2017). Other challenges facing the industry are Russian ban on imports which has restricted trade, reduction in total dairy herd in Oceania due to the low dairy prices, drought and adverse weather conditions (OECD & FAO, 2017). Additionally, the rapid growth and consumption of dairy products has potential harmful effects such as increased pressure on land and water resources, increased livestock's impact on climate change through greenhouse gas emissions, increased spread of diseases as result of more livestock contact with people and the marginalization of small scale farmers which has serious social implications (Muehlhoff et al, 2013).

4.2.2 Indian Dairy Industry

Ranking after the European Union (EU), India is the second world largest milk producer accounting for approximately 19% of the total global output during the period 2014-2016 (OECD & FAO, 2017). OECD & FAO (2017) further project that India will have the largest growth in milk production, overtaking the EU to become the world largest milk producer with 23% of the global share by 2026. The Indian dairy industry is expected to maintain a CAGR of 15% during the period 2016-2020 (IBEF, 2017).

Attracted by the size of the Indian market, there are several companies operating in the dairy industry, with Gujarat Cooperative, popularly known as Amul leading with 18.1 % market share. Mother Dairy, Karnataka Co-operative Milk and Tamilnadu Co-operative Milk account for 9.4%, 8.4%, 5.3% share of the market respectively, while other national and international companies account for the rest of the market share (EuroMonitor, 2018). Nestle with a market share of 1.8% and Lactalis Groupe with a market share of 2.1% are some of the multinationals operating in the Indian dairy industry (EuroMonitor, 2018).

There is a varying demand and consumption of different dairy products in which milk is counted among the vital staple foods (IDFA, 2018). According to MarketLine Report (2017), the dairy market in India is segmented as follows; milk accounts for 92.2%, butter and spreadable fats account for 3%, cheese accounts for 1.6%, yogurt compose of 1% and dairy-based and soy-based desserts and other dairy products account for 0.3% of the market value. It should also be noted that the Asia Pacific region is the largest dairy market globally, with the fastest growth but still lagging the rest of the world in the per capita consumption of milk hence has the potential for further expansion (EuroMonitor, 2017a).

In India, milk collection and marketing within the organized sector is mainly through dairy cooperatives and private companies. The dairy cooperatives in India have a significant impact on economic growth as they help improve the livelihoods of farmers by improving operations and increasing the incomes of the dairy farmers (NDDB, 2017a). In addition, open membership in the dairy cooperatives has helped in resolving social inequity through democratic election of representatives, improving hygiene and cleanliness, veterinary health care, women empowerment and improved nutrition (Sinha, 2007).

However, even though there is a massive growth of milk in India, not all members of the economic pyramid have access to dairy products (Muehlhoff et al, 2013). This is shown in the fact that one third of the world's undernourished children are Indian children (ILRI, 2011). Therefore, the increased efforts to improve the dairy sector within the country are expected to benefit producers by providing livelihoods and consumers by providing milk at affordable prices (ILRI, 2011). The Indian dairy industry also suffers from seasonal challenges such as the milk crisis experienced in 2014-2015 which negatively impacted on the milk procurement prices for farmers (Adi et al, 2017). The slump in global milk skimmed milk powder (SMP) prices caused a reduction in the SMP export volumes from India. Subsequently, the dairy processors in India disposed the SMP as recombined liquid milk which caused the milk procurement prices to plummet pushing farmers out of the market and causing consumers to purchase poor quality milk (Adi et al, 2017).

As argued above, the India's socio-economic environment is evolving because of both internal and external factors which then affect the agricultural sector. The following section analyses in detail India's macroeconomic environment by looking at the trends in the political, economic, social, technological, environmental and the legal environment and how they are impacting on the dairy industry.

4.3 Macroeconomic Setting - Indian Dairy Industry

4.3.1 Political Setting

According to the World Bank (2018 b), the GOI has been carrying out reforms in recent years to improve the business environment which has eased the inflows of foreign direct investments (FDI) leading to a significant improvement in the country's macro-economic stability. However, for the dairy industry, as much as India is among the world's leaders in milk production, the milk yields are about half of the world's average (World Bank, 2014). Hence, the government is pushing for more productivity within the industry. The GOI has been actively pursuing growth and development of the Indian dairy industry through several agricultural initiatives implemented through the Ministry of Agriculture and the National Dairy Development Board. One of the most transformative initiatives by the GOI was "Operation Flood" implemented in 1970 as a rural development and a market-oriented program aiming at

the modernization and development of the dairy industry which is now attributed to the growth of dairy cooperatives in India (Sinha, 2007).

The GOI in 2011 launched a strategic plan for dairy development intended to increase milk production to 180 MMT by 2020-2021, boost milk productivity of animals, improve milk quality through improvement of chilling infrastructure, increase the share of the organized sector, enhance milk consumption levels and elevate dairy farming practices (Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GOI, 2011). Another recent initiative by the GOI in the dairy industry is the National Dairy Plan introduced in 2012 (NDDB, n.d.). The program is being implemented for fifteen years with the first phase financed by the World Bank. The main objectives of the program are to increase the productivity of milch animals to increase milk production for the growing demand and to provide rural milk producers with greater access to the organized milk sector (NDDB, n.d.). Additionally, in 2017, the GOI approved the implementation of the Dairy Processing and Infrastructure Development Fund for the period 2017/2018 to 2028/2029 (Press Information Bureau, GOI, 2017a). The program's objective is to build an efficient milk procurement system by setting up chilling infrastructure, installing electronic milk adulteration testing equipment, modernizing the processing infrastructure and manufacturing facilities for value added products for the milk union and producer companies (Press Information Bureau, GOI, 2017a). These initiatives should facilitate the move towards the organized milk sector which benefits most stakeholders especially the farmers within the supply chain. The farmers can get higher prices for milk with improved chilling facilities, while at the same time the processing companies get higher quality milk and the consumers purchase healthier and safer milk products.

Additionally, the GOI's demonetization policy has proved to be very beneficial for the dairy sector. Cashless transactions after the demonetization are reported to have increased from 23.82% to 72.25% (Press Information Bureau, GOI, 2017b). However, challenges emanating from the political environment are being experienced such as the reduced public expenditure on livestock hence the need to monitor the impact of the public programs to develop strategy and enhance service delivery (World Bank, 2014).

4.3.2 Economic Setting

India is currently among the fastest growing economies in the world, with various sectors experiencing substantial changes. For instance, the increased industrialization and the growth of the service sector has led to a decline in the agricultural share of the of the GDP from 30% in 1991 to 14.5% in 2011, though it continues to be the major source of employment for more than 50% of the population (IBEF, 2013). However, studies indicate that a higher GDP in agriculture is more effective in alleviating poverty compared to the other sectors (IBEF, 2013). Therefore, the GOI continues to initiate agricultural programs aimed at more inclusive growth and meeting the rising food demand (IBEF, 2013).

Increased levels of FDI in India have been a contributing factor to the economic growth. According to IBEF (2018c), companies are attracted to invest in India due to the favorable government policies and the relatively lower wages with cumulative FDI increasing at 40% to reach US \$ 114.4 billion in the period 2015/2016 to 2016/2017. The rapid economic growth has also boosted the retail industry which is projected to grow from US \$672 billion in 2017 to US \$1.1 trillion in 2020 (IBEF, 2018c). However, it is interesting to note that the traditional grocery retailers, known as the ‘Kiranans’ account for most of the sales in packaged food whereby they account for almost 90% of the sales value (EuroMonitor, 2014). The growth in retail is driven by the favorable demographics, rising income and purchasing power, brand consciousness, change in consumer mindsets and easy consumer credit and increase in quality of products (IBEF, 2018b).

Nevertheless, the economic growth has caused challenges such as rising income inequalities and higher food inflation. According to Sasmal (2015), the high rate of food price inflation can be attributed to the growing demand due to the increase in per capita incomes, large public expenditure and the sluggish growth in agriculture causing demand to outpace supply. For instance, in the dairy industry, the price of milk, which is a component of the food basket, has been steadily increasing with the wholesale price index of milk rising at 10.5% CAGR during the period 2006-2014 (Rajeshwaran et al, 2014). India is also among the countries in the world whose income inequalities has increased rapidly. It is estimated that 55% of total national income is accounted for by the nation’s top 10% earners (Alvaredo et al, 2017). Therefore, the affordability of food among the dairy products especially for the BoP is therefore at risk if the trends in food inflation and income inequalities continue.

4.3.3 Social Setting

India, the second most populated country in the world, is characterized by changing demographics such as the higher percentage of young people, increase in female labor participation, and changing consumer habits and lifestyles. Because of the growing economy, the percentage of the middle-class households has grown steadily to reach 29% in 2014 which has impacted the consumption habits with growing preferences for expensive, higher quality and branded products (EuroMonitor, 2014).

India also has the world's highest percentage of young people, at a mean age of 29 in 2014, with the educated ones having higher incomes in comparison with the older generation (EuroMonitor, 2014). The young population therefore has higher disposable income and less propensity to save, which has impacted on the buying habits such as preference for packaged and branded yoghurts and flavored milk drinks (EuroMonitor, 2014). Female labor participation has also increased, contributing to the consumption switch from homemade dairy products to branded packaged products (EuroMonitor, 2016).

Consumers are also becoming more health conscious, giving attention to issues such as food safety and becoming more aware of the benefits of dairy products while increasingly shifting from carbonated drinks (EuroMonitor, 2016). Urbanization has also played a role in increasing the demand of specific dairy products. For instance, in India, the consumer demand for categories such as flavored milk drinks and soy products grew by 14% because of the demand for health and indulgence due to the rising middle class (EuroMonitor, 2010). These developments provide the market opportunity for sustainable growth for the dairy companies.

However, problems arise from some of these social trends. For instance, rapid urbanization has contributed to reduced activity among the population while increased incomes and changing consumer patterns have partly caused poor dieting habits which cause health problems such as obesity (EuroMonitor, 2016).

4.3.4 Technological setting

Through consistent efforts and technology applications, India has evolved in the last decades. The past few years have witnessed a massive technological growth and innovation in India and

the rest of the world. The GOI in 2015 launched the ‘Digital India Initiative’ aimed at transforming India into a digitally empowered society and knowledge economy. E-Kranti is one of the nine pillars of the Digital Initiative, where one of the objectives is to invest in technology for farmers and for financial inclusion to enable farmers access mobile banking and real time price information (Siwach & Kumar, 2015). The Digital India Initiative has also encouraged dairy cooperatives to route payments through banks and improve financial inclusion as the number of farmers with access to bank accounts increase (NDDDB, 2017a).

Furthermore, the use of mobile phones among the farming community has been effective in reducing information asymmetry and help the agricultural extension services (Rathod et al, 2016). As mobile phones are being the most used way to avail information related to animal husbandry and agriculture, time is being saved and instant and continuous information is being available (Rathod et al, 2016). EuroMonitor (2017b) also reports that internet penetration has increased rapidly in rural India giving wider access to e-commerce and information related to farming. The NDDDB has also been crucial in helping milk producers gain access to technology. One of the main technological progress achieved is the use of planned breeding strategy, called the Artificial Insemination (AI) that consists of cross-breeding exotic breeds with local ones (NDDDB, 2017b). However, the high cost of the process, the low conception rate, the poorly trained inseminators and the high incidence of reproductive problems in animals were major constraints to the adoption of the AI (FAO, 2013).

4.3.5 Environmental Setting

India is faced with various challenges in relation to the environment, with climate change, air pollution and water pollution being some of the major threats to sustainability. India was ranked by HSBC as the most vulnerable country to climate change which could cut agricultural incomes because of the rising temperatures and declines in rainfall (World Economic Forum, 2018).

Nowadays, India still suffers from poor air quality, making it in the bottom of the rankings in terms of environmental health. This problem has additionally affected the average life expectancy in India reducing it by 23 months (International Energy Agency, 2016). According to the Environmental Performance Index report released by Yale News (2018), India ranks 177th in the world in terms of air quality. In 2015, around 590 000 premature deaths in India

were caused by outdoor air pollution, while 1 million premature deaths were attributable to household air pollution (International Energy Agency, 2016). Urbanization, industrialization, rising incomes and demographic trends being the reasons behind the increased level of energy consumption and thus exacerbating air pollution (International Energy Agency, 2016).

One of the biggest threats to livelihood and food security in India is the depletion of groundwater sources (Gorton, 2017). Recently, water woes are becoming familiar in to Indian people (Earth Observatory, 2017). Since India is the world's largest consumer of groundwater with a high extraction rate, the groundwater replenishment is not sufficient to sustain water levels in several aquifers in India (Gorton, 2017). Besides, contamination and water pollution have been considered serious problems throughout the country resulting from the ongoing drought in eight Indian states (Gorton, 2017).

The dairy industry in India is one of the major contributors to climate change. According to the World Bank (2014), the livestock stocking rates in most areas in India are 5-10 times above the recommended levels and that water use per liter of milk exceeds the world average in the most intensive systems. Additionally, the agricultural climate-warming gases emissions such as methane, that will exist for 12 years in the atmosphere once emitted, account for 41% of man-made methane emissions (Aguirre-Villegas et al, 2016). However, there have been several environmental strides globally since 2006, when it was revealed that livestock is one of the major polluting and damaging sectors for the environment (FAO, 2006).

To help solve the problem of poor air quality in India, several policies have been adopted. The New Policies Scenario aiming at reducing the sulphur dioxide and nitrogen oxides emissions from power plants, the New Environment Protection Amendment Rules cutting pollutant emission of the power sector and the Clean Air Scenario are some examples of stringent regulations that can have a positive impact on the public health in India (International Energy Agency, 2016).

4.3.6 Legal Setting

The legal environment in India is also experiencing changes. Consumers are increasingly concerned about the health and safety of products that they consume (EuroMonitor, 2014). This provides increased market opportunities for dairy through associating dairy products with the

health and safety of consumers. Increased hygiene awareness coupled with the use of awareness campaigns to educate consumers on the health benefits associated with milk is also encouraging the shift to packaged milk. As a result, the industry is transitioning from unorganized to organized dairy, by moving from local milkmen to cooperatives and foreign private players. However, challenges continue within health and safety, emanating from food scandals such as the Nestle's Maggi noodle scandal and milk adulteration (EuroMonitor, 2014). Additionally, locals still perceive unprocessed milk as better in taste and freshness and there is price sensitivity among consumers especially in third tier cities and in rural areas (EuroMonitor, 2014).

Government regulations within the labor market have also had an impact on the competitiveness of the industry. In 2005, the GOI passed the National and Rural Employment Guarantee Act (NREGA) which created minimum wage for rural farmers and unskilled laborers while providing rural areas with infrastructure and public amenities equal to urban areas (EuroMonitor, 2014). Subsequently, this has improved incomes causing the demand for packaged food to rise faster in rural areas compared to the urban areas as consumer habits between the two areas converge (EuroMonitor, 2014).

In analyzing how the above trends in macroeconomic environment have influenced the adoption of sustainable business models in the dairy industry, we use two companies, Amul and Vijaya Dairy. Amul is a privately owned dairy company and currently the largest dairy company in India. On the other hand, Vijaya Dairy, is a government-owned dairy company based in the state of Telangana.

4.4 Case Companies

The two case companies are Amul and Vijaya Dairy which operate using the 'cooperative model.' Amul is privately owned by the farmers while Vijaya Dairy is owned by the government. Because cooperatives can increase assets and turnover, maintain high credit ratings and expand their memberships base, the United Nations believes that the cooperative model is a powerful drive and engine of sustainability (Dale et al, 2013). A cooperative can be defined as "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and

democratically-controlled enterprise” (UN, 2012). According to the United Nations (2012), the values of cooperatives are “self-help, self-responsibility, democracy, equality, equity and solidarity. In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility and caring for others.”

4.4.1 Amul

Popularly known as ‘Amul’, Gujarat Cooperative Milk Marketing Federation Limited (GCMMF) is India’s largest dairy company headquartered in Anand, Gujarat with an annual turnover of \$ 4.1 billion (Amul, 2018a). Formed in 1948, Amul is today owned jointly by 3.6 million farmers in Gujarat (N. Vasavada, Interview, 9 May 2018). 18 million liters of milk are collected daily from 18549 village milk cooperative societies, 18 members’ unions covering 33 districts (Amul, 2018a). This milk is converted into branded packaged products and delivered to reach 1 million retail outlets across the country (N. Vasavada, interview, 9 May 2018). The company has been experiencing fast growth especially in recent years with the revenues increasing from \$ 1.7 billion in 2009-10 to \$ 4.1 billion in 2016-17 (Amul, 2018a).

‘Anand’, the small town in Gujarat, was to “become known all over the world for the immensely successful experiment - rather than revolution - in sustainable dairy development through small and marginal farmers” (Singh, 2017, p.22). The journey that started in Anand in 1946 has known “a spectacular success, that it went on to become the role model for India’s dairy cooperative movement” (Singh, 2017, p.22) and is currently becoming a model for other dairy companies throughout the world (S. Sundaran, interview, 9 May 2018). Asia’s largest milk brand, Amul, follows an innovative three-tier organization structure known as “Amul Model” or “Anand Pattern” that combines the productive genius of farmers with professional management and modern technology (Amul India Story, 2015). The model consists of the “dairy cooperative societies at the village level federated under a milk union in the district level, and a federation of member of unions at the state level” (Singh, 2017, p.22). This model has helped India to be the world’s largest milk producer at the same time as ensuring a better life for millions (Amul, 2018a).

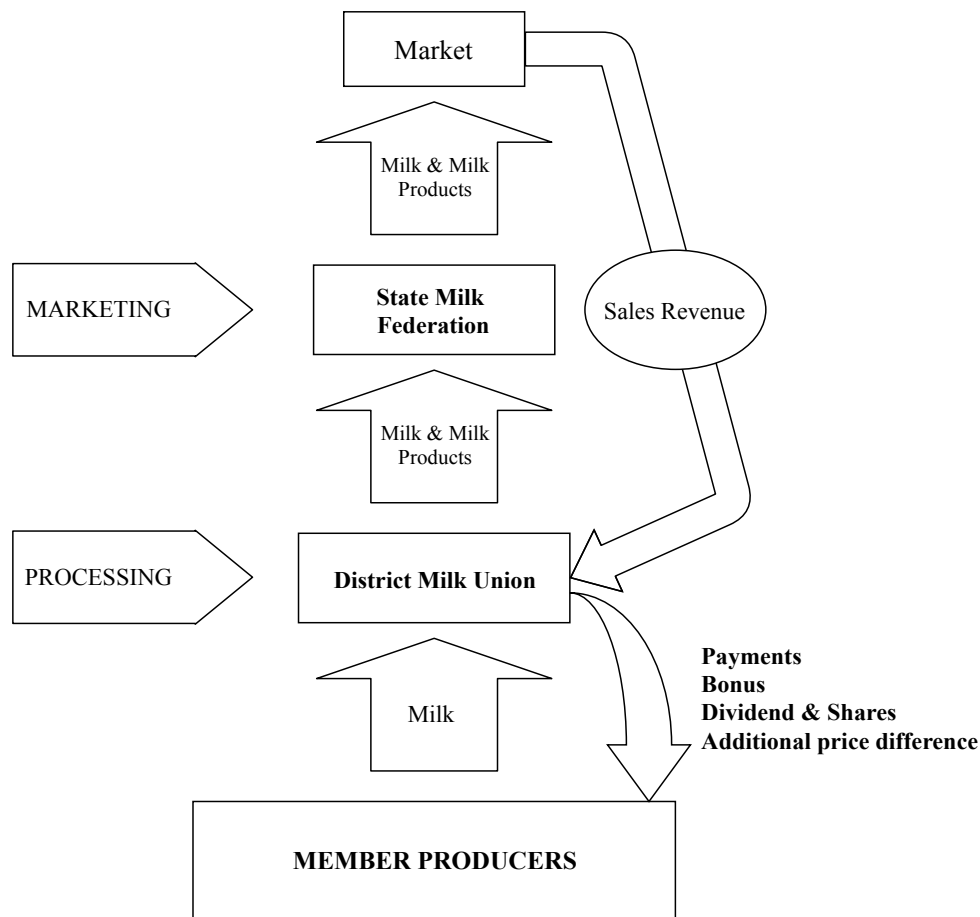


Figure 5 Amul Model (Amul, 2018a)

Amul is not only the largest dairy company in India but also India's largest exporter of dairy products (Amul, 2018a). Operating in India and USA and exporting to Gulf countries, Singapore, Philippines, Japan, China, Australia and many others, Amul was accorded "Trading House" status and received the Agricultural and Processed Food Products Export Development Authority (APEDA) award "for excellence in Dairy Products Exports for the last 16 years" (Amul, 2018a). The main aim of Anand Milk Union Limited (Amul) is to provide "products which are good value for money and to get the maximum price for the 3.6 million farmers owning the organization to at least cover their expenses" (N. Vasavada, interview, 9 May 2018). Amul is an organization "of the farmers, by the farmers, for the farmers and managed by professionals appointed by the farmers" (S. Sundaran, Interview, 9 May 2018). This means that Amul exists solely because of the farmers making the future of the brand inextricably linked to the future of the firms (Amul India Story, 2015).

4.4.1.1 Social Value

Political setting - The evolving political climate had impacted the operations for Amul. The demonetization policy implemented in 2016 forced the company to reorganize payment farmers. As A. Bayati (Interview, 9 May 2018) states “the demonetization had given us tough time, but we took it as a challenge. Now, demonetization has helped the system in general”. Also, “All our daily wage people and the farmers now have bank accounts.” According to A. Bayati (Interview, 9 May 2018), bank accounts opening has helped create a saving culture among farmers, which builds on their credit scores hence helping them access loans to improve their farming activities.

Economic and Social Setting - According to A. Bayati (Interview, 9 May 2018) Amul operates under the ‘Value for Money’ policy whereby it seeks to provide maximum price for the 3.6 million farmers who are members of the GCMMF cooperative. The company operates on very low margins, ensuring that 80 to 85% of the margins go back to the farmers to help them recover all their production costs and improve their livelihoods (A. Bayati, Interview, 9 May 2018). Amul has also put in place several programs to help improve the animal productivity for farmers. Programs carried for farmers by Amul include cross breeding, artificial insemination for animals, provision of mobile veterinary doctors and importation of quality semen to improve the animal quality which leads to higher productivity and therefore more income generation for farmers (A. Bayati, Interview, 9 May 2018). Amul has made veterinary doctors to be available on call all the time to respond to farmers request for assistance on their animals (S Sundran, Interview, 9 May 2018). Subsequently, most of these programs have helped improve the milk productivity to an average of about 10 to 11 liters of milk per day for each animal (A. Bayati, Interview, 9 May 2018). Amul also provides farmers with nutritious cattle feed from their cattle feed plants to help increase milk production, improve animal health and immunity and improve milk fat content (Amul, 2018b).

To improve the accessibility of safe and quality milk products among consumers, Amul has expanded its distribution capacity. By doing so, Amul has made its products available even in small towns with population of between 2,000 to 10,000 people (A. Bayati, Interview, 9 May 2018). Amul reports that in the financial year 2016 - 2017, 1250 distributor were added to its distribution network and its rural reach was strengthened with 181 super stockists covering 3,600 interior markets (Annual Report, 2017). Increased rural electrification in India, has also

been a contributing factor for growth in consumption of packaged dairy products as people are able to store their products for longer. Through, the ‘value for money’ policy, Amul ensures that safe dairy products are made available to consumers at affordable prices. Additionally, by providing healthy and a variety of dairy products, Amul and Vijaya Dairy are helping address the problem of consumption of unhealthy products such as soft drinks.

According to A. Bayati (Interview, 9 May 2018), the current social trends have contributed to the transformation of dairy from the unorganized sector to the organized sector. Urbanization, need for convenience associated with refrigerated products, rising consumer awareness on food safety and higher levels of education are also some of the other social developments leading to the transmission to the organized dairy sector (A. Bayati, Interview, 9 May 2018).

Technological setting - ‘Technology is a great enabler for financial inclusion, and the path to rural empowerment lies in digitalization’ (Amul, p. 8, 2017). Being the first company in the world to process buffalo milk, Amul has always brought breakthrough dairy technology to keep up with the high demand. “To be able to connect the farmer with the global market, a lot of technology is being brought, a lot of quality systems and standardized processes” (S. Sundaran, Interview, 9 May 2018). Besides, due to modern ways of filtration, clarification, pasteurization, chilling, filling, packing and storage of milk, “Amul has been certified by the European Union and now the milk can go to any part of the world” (S. Sundaran, Interview, 9 May 2018).

To increase the productivity of the cattle, several technologies were used by Amul. Semen-sexing technology as well as Artificial Insemination have helped optimizing the milk production. “Semen-sexing technology [technology used to maximize the chances of female cattle progeny] helped us much” (S. Sundaran, Interview, 9 May 2018). In addition, as the success of the Artificial Insemination is being monitored, it was shown that it had a great impact on milk production (N. Vasavada, interview, 9 May 2018). Furthermore, to ensure the quality of its products, Amul adopted new analytical methods by using fully-automatic and reliable machines to determine the hygienic quality of raw milk to avoid contamination (S. Sundaran, Interview, 9 May 2018). This has led to a substantial improvement in the quality of the milk and improved the returns of the farmers since the results are used to screen “the hygiene status at the farm level” (Amul, 2018b).

Additionally, Amul has adopted digital marketing for its products and all its transactions are done digitally which minimizes cash handling at society level and has helped improve on transparency of the entire value chain (A. Bayati, Interview, 9 May 2018). Banking has also been facilitated by the wide availability of ATMs in most villages in India. Amul has also installed an Automatic Milk Collection System (AMCS) which enables farmers to obtain milk receipt through SMS and provides the quantity of milk, fat percentage and receivable amount hence farmers are able to keep records for their activities (Annual Report, 2017).

However, according to A. Bayati (Interview, 9 May 2018), several challenges still inhibit maximum income generation for farmers. India, being a densely populated country has low land availability, which increases animal feeding costs as there is less grazing land forcing farmers to spend money buying fodder. Also, animal productivity is still not at par with the European levels, costs of production are still high, seasonal challenges occur and the lack of modern farming facilities continue to plague the dairy industry.

4.4.1.2 Environmental Value

Amul has adopted several programs and technologies to help reduce on its material consumption and waste generation. The production department, for instance, has a current target of “saving 30 000 liters water per day in the processing section” (N. Vasavada, Interview, 9 May 2018). Amul has adopted an eco-friendly technology for use in its production process and currently ensures that “none of its production processing has an adverse effect on the environment” (N. Vasavada, Interview, 9 May 2018). Amul has also increased its use of renewable energy in its processes, for instance, in the AmulFed plant, the company has installed solar LED lights, rooftop solar panels with a capacity of 200 kilowatts which has helped reduce on electricity dependency (A. Bayati, Interview, 9 May 2018). Additionally, Amul uses its organic waste to produce methane gas which is then reused in the production process and the company also ensures that there is 100% solid waste recycling (A. Bayati, Interview, 9 May 2018). By using green fuels and reducing the gas consumption in most of its processing, the current emissions by the company are almost negligible (A. Bayati, Interview, 9 May 2018). Additionally, every department at Amul sets environmental targets and objectives to improve on its environmental management system.

The company has undertaken environmental initiatives outside its operating functions. Amul, for instance, has shown its “concern, awareness and commitment for betterment of environment” by planting more than 619.7 lakhs, that is 61970000, tree saplings in more than 28 districts of Gujarat in the last nine years (Amul, 2018b). Amul is also responsible for the management of about 200 municipal gardens in the city of Ahmedabad in Gujarat (A. Bayati, Interview, 9 May 2018).

4.4.1.3 Corporate Social Responsibility and Creating Shared Value

Amul is discharging a social responsibility and creating shared value through the 3.6 million poor farmers whose livelihood is dependent upon their livestock. The company ensures that corporate social responsibility towards the farmers is fulfilled by “giving the farmers the control of the procurement, processing and marketing and making them the decision makers” (S. Sundaran, Interview, 9 May 2018). Moreover, the directors in charge of policy decisions at all the three levels of the cooperative “are elected, not selected or appointed” (S. Sundaran, Interview, 9 May 2018). Singh (2017), argues that “by placing the producer member in command, as the owner of his/her dairy cooperative, it involves her in the process of development”. Amul, by using the cooperative model, values the farmer and makes social responsibility one of the main pillars of the company. The company also believes that “When there is corporation coordination among the four entities: the producer, the manufacturer, the dealer of marketing and the consumer, there is a progress on progress, development on development, success on success. There is a win-win situation for all the four” (S. Sundaran, Interview, 9 May 2018).

4.4.2 Vijaya Dairy

Telangana State Dairy Development Cooperative Federation Limited, marketed under the brand name of ‘Vijaya Dairy’, is a dairy company started in 1967 and based in Hyderabad, Telangana. The cooperative was formed following the ‘Anand Model’ that started in 1965 in the state of Gujarat and it was the first cooperative within the state of Telangana. It is currently owned and operated by the state government of Telangana. According to K. Nirmala (Interview, 7 May 2018), the managing director of Vijaya Dairy, the company has currently a capacity of 450,000 liters a day and markets about 17 products that include milk, flavored milk, yoghurt, butter, cheese and sweet, with ghee being the most popular and profitable products with sales of 150 tonnes per month (K. Nirmala, Interview, 7 May 2018). Most of the milk

products are sold within the state of Telangana, but they also sell the ghee in Mumbai and the butter in New Delhi (K. Nirmala, Interview, 7 May 2018).

The company milk products are popular among the population in the state of Telangana, with the major competition being from a private company, Heritage Dairy (K. Nirmala, Interview, 7 May 2018). According to V. Reddy (interview, 7 May 2018), the company collects milk from all the 31 districts within the state of Telangana and it has approximately 100 chilling centers in all the 31 districts, where milk is stored once collected from the farmers before being transported to the city in Hyderabad. The company contracts distributors to transport milk in chilled condition to the city, which is done within a day after milk collection as all the chilling centers are within 200 km radius from the city of Hyderabad. Milk distribution to consumers is mainly done through contracted milk distributors, whereby milk is delivered to people's doors early in the morning.

4.4.2.1 Social Value

Political and technological setting - Government initiatives such as the National Dairy Plan have encouraged animal breeding and the uptake of animal rearing especially in dry and drought-stricken regions hence providing an alternative source of income for marginal farmers (K. Nirmala, Interview, 7 May 2018). These programs have also improved on farmer education by providing the training on good animal keeping practices to encourage productivity. Also, in some states such as Telangana, additional assistance is given to the dairy farmers by collaborating with dairy companies to provide veterinary ambulance services for animals (K. Nirmala, Interview, 7 May 2018). The demonetization policy and adoption of the 'Digital India Initiative' by the government has impacted on the dairy companies' activities. Dairy cooperatives in India have streamlined their payment systems, encouraging cashless transactions by facilitating the process of opening bank accounts for farmers (K. Nirmala, Interview 7 May 2018). Encouraged by these government initiatives, Vijaya Dairy is currently in the process of transforming their supply chain process to a full online reporting process to help facilitate real time information tracking for farmers and the company (K. Nirmala, Interview, 7 May 2018).

Additionally, through, the Rural Development Program initiated by the government, there has been increased women empowerment as they are organized into self-help groups that have

helped them take up dairy farming by buying milch animals from the daily savings they accumulate through these groups (K. Nirmala, Interview, 7 May 2018). For instance, according to the World Bank (2017b), in the state of Bihar in India, the self-help groups, known as 'Jeevika' have about seven million female members who have saved up \$ 64 million and leveraged another \$ 500 million from the formal financial sector.

Economic and social setting - The dairy companies also help address the challenge of rising inequalities by alleviating poverty through the provision of alternative forms of employment for the distribution to people in the distribution of their supply chain. In India, daily delivery of fresh milk to homes is popular among the consumers. For instance, in Hyderabad, Telangana, where Vijaya Dairy is based, there are people employed by the contracted distributors to deliver fresh packaged milk to people's home early in the mornings (V. Reddy, Interview, 7 May 2018).

However, Vijaya Dairy continues to face several challenges that inhibit its ability to deliver on maximum social value. According to K. Nirmala (Interview, 7 May 2018), marketing challenges arise due to the seasonality in milk production, which makes it difficult to maintain good prices for farmers during the surplus season. Additionally, the cost of rearing animals has been increasing, impacting on the profitability for famers.

4.4.2.2 Environmental Value

While the secretary of the government claims that the milk industry in general has no impact on environment and milk processing does not require water (S. Sultania, Interview, 8 May 2018), in our observations during the plant tour at the dairy, the processing activities and operations are very water intensive. This can be attributed to the fact that the plant is over 50 years old. Therefore, to mitigate this problem, Vijaya Dairy is currently planning on the installation of a new dairy processing plant that will leverage on new technologies such as solar energies to help in environmental conservation (K. Nirmala, Interview, 7 May 2018).

4.4.2.3 Corporate Social Responsibility and Creating Shared Value

As a government-owned company, Vijaya Dairy plays a role in promoting and enabling shared value creation. The secretary of the government claims that "the government is giving money to farmers without getting anything in return besides the taxes" and the main "objective of

Vijaya Dairy is to help farmers and increase their income” (S. Sultania, Interview, 8 May 2018). Moreover, concerning the corporate social responsibility, Vijaya Dairy is more focused on delivering social value while trying to implement strategies that consider the environmental impact of its business activities to be more sustainable in the future.

4.5 Chapter Summary

India’s socio-economic context is therefore seen to be experiencing various macroeconomic trends which have trickled down to the dairy industry. The socio-economic developments such as the Government agricultural initiatives and increased incomes have increased the demand and supply for dairy products across the country. To keep up with the demand and supply, the dairy companies, Amul and Vijaya Dairy, have responded to the socio-economic by realigning their business models and streamlining their operations.

5 Discussion

5.1 Macroeconomic Analysis of the Indian Dairy Industry

As identified in the previous chapter, the dairy industry in India is experiencing significant changes in the macroeconomic environment. This industry is faced with some of the EMs' characteristics such as increasing market size and fast growth rate. The growth rate of the industry is projected to continue at 15% CAGR (IBEF, 2018a) and the market size is also growing very fast. Amul, for instance, has been able to increase its revenues from \$1.7 billion to \$4.1 billion in the period between 2009 and 2017. Hart & Milstein (1999) argue that EMs are characterized by increased demand for products and services. Our findings confirm that the dairy industry in India is experiencing fast growth in both supply and demand. In this industry, the supply has been growing as the dairy sector continuously evolves from unorganized to organized sector while the demand for the dairy products, consisting of the ambient, fresh, chilled and frozen categories has also been increasing (A. Bayati, Interview, 9 May 2018).

The fast growth in the industry can then be attributed to the growth in demand and supply of dairy products, mostly driven by macroeconomic trends. The political setting in India has contributed greatly to improved supply through programs aimed at increasing the productivity within the dairy industry. The government's initiatives to support dairy farmers, such as Operation Flood and the National Dairy Plan, have enhanced productivity through quality animal breeding and by providing market access in the organized sector. The government's policy on demonetization and the 'Digital India Initiative' have also been instrumental in providing greater financial access for farmers in the dairy industry and driving innovation among dairy companies.

The developments in the social and the economic environment have generated more demand for dairy products. As the Indian economy grows, more people are generating higher incomes thereby moving to the middle-class level of the economic pyramid. As Piyush et al (2018) argue, the rising income levels in EMs have led to a rise in consumption reducing differences with developed nations. N. Vasavada (Interview, 9 May 2018) confirms that the demand in the fresh category is experiencing the highest growth in volumes, with other dairy products such

as toned milk products namely ‘lassi’ and ice creams showing promising growth. The changing demand patterns for dairy products are attributed to the social and economic trends ranging from increase in number of working females, higher incomes, need for convenience, more educated people, urbanization to increased health consciousness among consumers.

Besides the political, social and economic trends in the Indian dairy industry, there are other trends arising from the technological, environmental and legal environment that have deeply affected the industry. Climate change, air and water pollution and intensive water use, for instance, are some main environmental challenges facing the dairy industry and pushing dairy companies to look for alternative ways to become ecologically sustainable.

The table below summarizes some of the main macroeconomic changes affecting the dairy industry:

Macroeconomic Trends	Trends affecting the Indian Dairy Industry
Political	<ul style="list-style-type: none"> ● National Dairy Plan ● Dairy Processing and Infrastructure Development Fund ● Digital India Initiative ● Demonetization policy
Economic	<ul style="list-style-type: none"> ● Decline in agricultural share of the GDP ● Increased levels of FDI ● Growth in the retail industry ● Increase in income inequalities ● Higher food inflation
Social	<ul style="list-style-type: none"> ● Higher percentage of young people ● Growth of the middle class ● Increase in female labor participation ● Increasing health consciousness ● Concern for food safety

	<ul style="list-style-type: none"> ● Urbanization ● Education ● Poor diets and health problems
Technological	<ul style="list-style-type: none"> ● Digital India Initiative ● Increased use of mobile phones ● Artificial insemination ● Increased internet penetration
Environmental	<ul style="list-style-type: none"> ● Air and water pollution ● Climate change ● Increased levels of energy consumption ● Depletion of natural resources such as water ● High livestock stocking rates
Legal	<ul style="list-style-type: none"> ● Increased concern for health and safety ● National and Rural Employment Act

Table 3 Indian Dairy Industry Macroeconomic Environment

5.2 Sustainability & Sustainable Business Models

Traditionally, the Indian dairy industry has a major presence of dairy cooperatives, whose foundation was driven mainly by the macroeconomic environment. The idea behind the creation of dairy cooperatives in India was caused by the economic challenges faced, mainly after the country's independence when there was a huge need to create opportunities for BoP, to improve their livelihoods. These cooperatives usually use SMBs to create market opportunities for agricultural producers from the BoP, mainly consisting of farmers in rural areas. Hart & Milstein (2003) identify poverty and income inequalities as drivers for global sustainability. In the case of the two companies, Amul and Vijaya Dairy, the objective behind their formation was to enhance social development and create wealth by empowering farmers in dairying activities. S. Sundran (Interview, 9 May 2018) confirms this by saying that “the Amul Model or the Anand Pattern is the only economic model for a sustainable development” and “how people have a sustainable income generating activity is all the model is about.”

This model, popularly known as the ‘Anand Pattern’ or ‘Amul Model’, has been very successful in improving incomes for farmers with the support of government initiatives through the NDDDB. The ‘Amul Model’, due to its success, has therefore been replicated among many dairy cooperatives within the different states in India. Our subsequent analysis and discussion identifies social and environmental value forms of SBMs and how both Amul and Vijaya Dairy are incorporating them in their business models due to the prevailing macroeconomic trends.

5.2.1 Social Value

To deliver on social value, both Amul and Vijaya Dairy have undertaken a lot of activities to empower their stakeholders especially the farmers who are the ‘suppliers’ in the dairy supply chain. These initiatives are mainly being driven by the existing macroeconomic activities and are in line with the UN SDGs whereby, through empowering dairy farmers, the companies are helping in the alleviation of poverty, reducing income inequalities, helping fight hunger and promoting decent work and economic growth in India.

There are existing political factors that have pushed towards the adoption of SBMs to deliver on the social value forms. For Amul, the demonetization policy by the government of India caused the company to re-evaluate their payment systems for farmers. Nidumolu et al (2009) argue that identifying compliance as an opportunity for innovation is the first stage for companies in their quest of tackling sustainability challenges. In this case of demonetization, Amul and Vijaya Dairy had to innovate through the adoption of cashless payments for farmers which ultimately led to more financial access and inclusion for farmers. Also, government initiatives such as the National Dairy Plan and the Dairy Processing and Infrastructure Development Fund, which are implemented in collaboration with dairy companies such as Amul and Vijaya Dairy have been able to help improve on dairy productivity. For Vijaya Dairy, by helping improve on animal breeding, investing on farmer education and encouraging animal rearing in dry areas, productivity has improved which has caused increased income and better livelihoods for farmers. Additionally, the Rural Development Program has helped support small women producers through financial access and inclusion to help improve on agriculture and livestock productivity.

To help address the social and economic problems especially the increasing income inequalities, both Amul and Vijaya Dairy have undertaken several initiatives for social and economic empowerment, especially among the dairy farmers. As S. Sundran (Interview, 9 May 2018) states “Amul is not just about buying and selling milk.” Through the ‘Value for Money’ policy and programs targeted at improving animal productivity, Amul has been able to ensure profitable returns for the farmers thereby improving their livelihoods. According to S. Sundran (Interview, 9 May 2018), “backward integration makes the business sustainable.” Hence the reason why Amul is intent on making the farmers, who are the producers, an integral part of the supply chain by ‘supporting farmers for sustainable production.’ On the other hand, Vijaya Dairy, through collaboration with the government on their initiatives, has been able to build on farmers’ capacity and improve productivity and milk supply volumes. Most of these programs by the dairy companies and government are long-term and are attributed to the rapid improvement in milk production volumes in India as the dairy sector is still expected to continue at 15% CAGR. Additionally, to address the demand and health and safety concern among consumers, Amul has invested and expanded its distribution network to reach small towns so as ensure that safe, healthy and affordable milk products are made available to most people.

The development in technology has also facilitated the adoption of SBMs. According to the Annual Report (2017), Amul, for instance, leverages on online electronic databases to store farmer and animal information that provides the foundation for productivity enhancement programs, scientific animal rearing and farm management programs. Similarly, Vijaya Dairy is in the transition process to a fully online reporting system to facilitate ‘real time’ information tracking. Therefore, leveraging on new technologies has enabled the dairy companies improve the supply chain process and contributed to more digital education and inclusion among farmers hence socially and economically empowering them.

5.3.2 Environmental Value

To save the environment and reduce effects of global warming, cooperatives in India have taken up ambitious plans. As the dairy industry is among the most water-intensive industries, dairy companies are taking initiatives to reduce the level of water consumption in both production and processing. Amul has undertaken several initiatives as outlined in the empirical findings to cut on pollution in its production processes, reduce energy and water consumption

to be more ecologically sustainable. Nidumolu et al (2009) identify the second stage for companies in addressing sustainability challenges as making value chains sustainable by increasing efficiencies of their supply chains. Therefore, Amul is addressing the sustainability challenges through its commitment to improve on its production efficiencies using the ‘3 Rs’ of reusing, reducing and recycling. Additionally, by adopting these initiatives, Amul helps to address the challenges caused by increased industrialization as identified by Hart & Milstein (2003), on the need for resource efficiency to minimize material consumption, pollution and waste generation. However, in the case of Vijaya Dairy, there was a contradictory view on environmental sustainability. The operations of the dairy plant are not having much environmental impact but through our observations, the plant operations are very water intensive. Regarding ecological sustainability, there are no initiatives or programs identified to be currently in place to reduce on material consumption, pollution and waste generation. However, the company is planning on building a new and modern dairy plant which will be more environmentally friendly and sustainable.

Based on our analysis of how Amul and Vijaya Dairy are delivering on social and environmental value, we then evaluate the extent to which the characteristics of the business models employed by each company are sustainable, using Stubbs and Cocklin (2008).

SBMs Characteristics	Amul	Vijaya Dairy
SBMs draw on the economic, environmental and social aspects of sustainability in defining the organization’s purpose.	<p>High - The cooperative model used by the company ensures maximum social benefits especially for the farmers.</p> <p>Environmental sustainability is a core part of company’s activities through initiatives aimed at minimizing its environmental impact by reusing, reducing and recycling.</p>	<p>Moderate - The most important stakeholders are the farmers whom the company ensures get maximum benefits for their economic empowerment.</p> <p>Environmental sustainability is not at the core of the business operations but there is a plan to build a new modern and efficient milk processing plant.</p>

<p>SBMs consider all the stakeholders needs rather than giving priority to shareholders' expectations. The success of the business is linked to all stakeholders inclusive of the local community, suppliers, employees and customers.</p>	<p>Moderate - The company gives most priority to its shareholders, who are the farmers. However, the needs of other stakeholders such as the consumers and the community are still considered.</p>	<p>Moderate - gives more priority to the suppliers, who are the farmers since the company is government owned.</p>
<p>SBMs use the triple bottom line in measuring performance hence the sustainability mindset is embedded within the organization.</p>	<p>Low - The company reports its performance using only the annual financial report.</p>	<p>Low - The company reports its performance using only the annual financial report.</p>
<p>SBMs treat nature as a stakeholder and promotes environmental stewardship using renewable resources, technological innovation to minimize waste and pollution and reduced consumption.</p>	<p>High - Environmental sustainability is at the core of the company operating activities e.g. through waste recycling, use of solar as a renewable energy and reduction in water consumption</p>	<p>Low - Environmental sustainability is currently not a priority within the operations of the company.</p>
<p>SBMs comprise of both the systems perspective and the firm-level perspective whereby firms develop internal and structural capabilities to achieve firm level sustainability.</p>	<p>High - The company tries to be sustainable through its own internal capabilities and by engaging the systems around it.</p>	<p>Moderate - The company is currently making plans to have a more sustainable surrounding.</p>

SBMs have the support of sustainability leaders who drive the cultural and structural changes necessary to implement sustainability.	Low - There is currently no sustainability champions in the company.	Low - There is currently no sustainability champions in the company.
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Table 4 Sustainable Business Models (Stubbs and Cocklin, 2008)

5.3 Creating Shared Value, CSR and SBMs

The ‘cooperative’ business models employed by many of the dairy companies in India is hinged on creating shared value. Amul in its Annual Report (2017) states, “highly appreciated and recognized for creating shared value successfully, the business approach of Amul has always been to reconnect the company success with social progress.” To create shared value, by creating economic value in a way that also creates value for the society, the ‘cooperative’ model used by many of the dairy companies has been able to address one of India’s main social and economic challenge of poverty. For instance, while Amul strives to provide high quality products to its consumers, its main and first mission is to serve the interests of its milk producers. Amul is committed to its milk producers by ensuring them “the most remunerative milk price” (Amul, 2017). Similarly, Vijaya Dairy which is owned by the government, has one of its main objective as giving maximum economic benefits to its suppliers who are the farmers through high milk procurement prices and through programs to support animal productivity.

London & Hart (2004); Porter & Kramer (2011) argue that to succeed in EMs, businesses should adopt strategies that focus on co-inventing custom solutions, building local capacity and redefining productivity in the value chain. Using the cooperative model, the dairy companies have developed a solution to solve the problem of exploitation of farmers by the middlemen through giving them power to control the business as is the case at Amul. Through collaboration with the government on its initiatives, the dairy companies, Amul and Vijaya have helped build local capacity and improve on dairy productivity across villages in India, hence empowering and improving the livelihoods of many farmers. Porter & Kramer (2011) identify that procurement practices can improve the supplier’s quality and productivity through increasing

access to inputs and sharing technologies, which is the case for Amul and Vijaya Dairy, as they have provided affordable access for farmers to technologies and inputs for dairy farming. Amul and Vijaya Dairy eventually benefit through increased production volumes, boosting their revenues which ensures their economic success.

Therefore, by incorporating the concept of shared value and corporate social responsibility, the business model utilized by Amul delivers on the social and environmental value forms while Vijaya Dairy business model is mainly focused on delivering social value.

5.4 Bottom of the Pyramid

In the dairy industry, the ‘raw materials producers’ within the supply chain consists of the farmers who form part of the BoP in India. In our analysis above, the implications of the macroeconomic trends are identified. The trends that have an impact on the BoP mostly emanate from the economic, social, technological and political environment. For instance, fast economic growth has negatively impacted on the BoP by contributing to rising inequalities and food inflation. On the other hand, some of the government initiatives such as the National Dairy Plan and Digital India initiative have positively contributed to the financial empowerment of the BoP. To respond to the challenges and opportunities caused by these trends, the business models adopted by the dairy companies have helped address the issue of poverty for farmers, most of whom belong to the BoP in India. Amul, for instance by operating on a “‘low price, low margin, high volume’ business model ensures maximum milk procurement prices and benefits for the shareholders, consisting of the farmers. Through the use of sustainable business models, these dairy companies have also been able to deliver on maximum social value for the BoP. Additionally, the popularity in the use of the cooperative model in dairy in India, has been very beneficial especially in the alleviation of poverty in rural areas.

5.5 Revised Theoretical Framework

Based on our analysis of the empirical findings, it has become clear that there is a relationship between macroeconomic trends and adoption of sustainable business models in the Indian dairy industry. Based on the theoretical framework, the main aspects that emerge from our empirical findings are as outlined below:

- **On the use of sustainable business models and macroeconomic trends:**

Government policies and programs have had a major influence on the use of SBMs. Initiatives aimed at promoting animal productivity and market access for farmers such as the National Dairy Plan that have received the support of dairy companies. Other policies such as demonetization and the Digital India Initiative that have pushed dairy companies to innovate on how to use technology for both companies' benefits and for the farmers. Subsequently, financial access and inclusion has improved among farmers which has strengthened their incomes from dairy farming. Hence, the government has been influential in helping companies deliver on social value form for a more sustainable development of the Indian dairy industry.

Building on supplier's capacity. Throughout the research, it was evident that there was a need to increase the milk production volumes to meet the fast growth in demand. Economic and social factors such as the increasing incomes, burgeoning population and urbanization have caused the rapid increase in demand for dairy products. On the other hand, some of the same factors emanating from economic growth have led to higher income inequalities in India. To help address these challenges of insufficient supply and income inequalities, initiatives have been undertaken to improve on animal productivity. Subsequently, the income earnings for farmers have improved while at the same time increasing the milk production volumes to meet the growing demand. Therefore, programs such as veterinary services, farmers' education and assistance on animal breeding and artificial insemination initiated by the dairy companies and the government have helped improve productivity within the dairy industry hence addressing some of the socio-economic challenges emanating in India.

Leveraging on technology. The benefits of using technology are far-reaching in the dairy industry. Dairy companies are leveraging technology in their daily business operations and increasingly adopting fully automated and online systems, while being encouraged or pushed by the government's policies and programs. Farmers have also been encouraged to open bank accounts and use their mobile phones to access agricultural information through the same policies and programs. Subsequently, this has enhanced financial access among farmers such as the ability to get loans to improve on the farming capacity. Additionally, the use of technology is also contributing to a more transparent system of operations within the dairy companies.

Environmental sustainability. Although a dairy company such as Amul has programs in place for an ecologically sustainable production, environmental sustainability is still a challenge that is not being effectively addressed in the full dairy supply chain. In our study, we did not get any information on how the dairy companies are helping farmers address environmental sustainability, as studies indicate that the dairy industry is very resource intensive and that dairying activities are a cause of climate change through greenhouse gas emissions.

- **On creating shared value, corporate social responsibility and SBMs:**

The use of the ‘cooperative’ business model. From our research, it has become evident that the use cooperative model by many of the dairy companies has been beneficial in helping deliver on social value form. The model has worked for farmers in the dairy industry, as they are assured of good procurement prices for their milk hence they can recover their costs and earn additional income which helps in improving their livelihoods. Additionally, the model supports programs that are geared towards improving animal productivity which empowers dairy farming, therefore addresses the problem of poverty within the BoP.

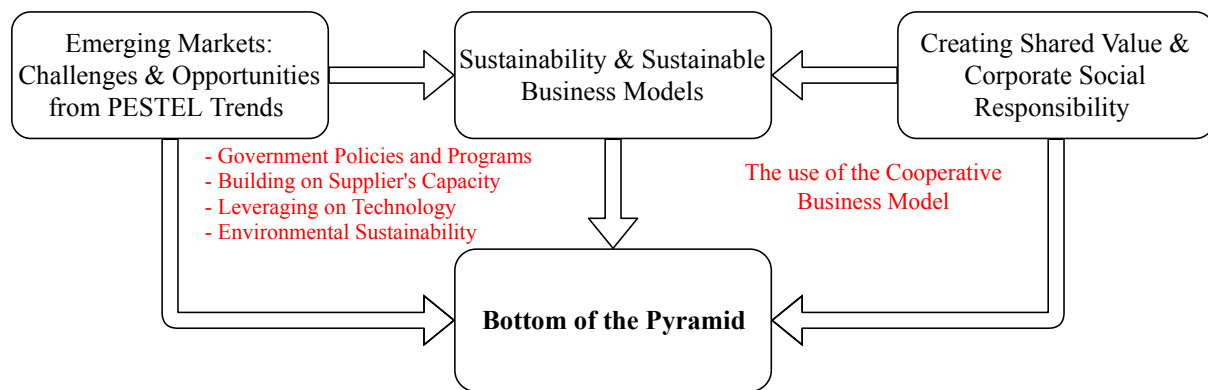


Figure 6 Revised Theoretical Framework

5.6 Chapter Summary

It can be concluded that the existing macroeconomic trends have caused the two dairy companies, Amul and Vijaya Dairy to adopt more sustainable business models. To cope with the growing demand of dairy products caused by factors such as population growth, urbanization, rise in incomes and changing lifestyles, it has become important for the dairy companies to increase their supply volumes. Increase in supply of dairy is mainly done through

increasing the capacity for farmers. The dairy companies have created programs and initiatives to help improve dairy animals' productivity such as animal breeding, education on good animal keeping practices and providing nutritious feeds. Additionally, government's programs, some of which are done in collaboration with the dairy companies have been instrumental in improving the milk production volumes for farmers in India. Other macroeconomic trends such as the demonetization policy and increase in use of technology have helped increase financial access and inclusion for farmers. In the process, productivity has increased thereby improving the income levels for farmers most of whom are part of the BoP. Using the 'cooperative model', Amul, for instance has been able to create shared value, a more sustainable business model as it helps deliver on maximum social value, thereby helping address the issue of poverty among the BoP. Finally, for environmental value form, the effort among the case companies differ.

6 Conclusion

6.1 Research Aims and Objectives

As explained in the beginning of our research, most of the studies on SBMs and the BoP have concentrated on the ‘consumer side’ instead of the ‘producer’ side of the supply chain which has more potential in addressing the challenges of the BoP. In our research, therefore, we have concentrated more on the ‘producer’ side of the supply chain using the case of the Indian dairy industry. Using two case companies, Amul and Vijaya Dairy we have examined a holistic set of macroeconomic environment changes that are more likely to influence the adoption of SBMs.

The main objective of our thesis was to answer the question of *“How are macroeconomic trends influencing the adoption and use of sustainable business models to address the challenges faced by the Bottom of the Pyramid within the supply chain in Emerging Markets?”* To help address this research question, we identified three main objectives for our study. The key outcomes on each of the objectives are discussed below.

1) Understanding macroeconomic trends

From our research findings, it can be concluded that the Indian dairy industry is affected by many of the external trends within the business environment. The increase in demand for dairy products can be attributed to the fast economic growth which has caused an increase in incomes and growth of the middle class. Social developments such as urbanization, increased women in the labor force, education and population growth have also caused change in consumption habits resulting in a higher demand for products. Macroeconomic trends have also led to the increase in milk production volumes from farmers. The programs and policies initiated by the government and the growth in use of technology are some of the key factors leading to improved productivity of the dairy industry.

2) Understanding how the trends are influencing the adoption of SBMs by businesses within the Indian dairy industry to address the challenges faced by the BoP.

From our research, the outcome is that the political and the technological macroeconomic settings have had the most influence on the adoption of SBMs by companies. Government policies and programs such as the National Dairy Plan and demonetization policy have received the support of dairy companies, as they are in line with their objectives of promoting animal productivity, increasing use of technology and improving on financial access and inclusion among the farmers. The companies have also leveraged on technology to automate their systems, improving on communication, transparency and record keeping with the farmers. Subsequently, these trends have helped the dairy companies deliver on social value, by improving dairy farming hence empowering the BoP, who are ‘the suppliers’ by improving their livelihoods through increased and alternative sources of incomes.

3) A comparative evaluation between the literature review findings and the empirical outcomes of the research findings.

From our literature review, it was clear that the use of SBMs, corporate social responsibility, and shared value creation are key points in the industrial sustainability agenda and have the potential to cater for the needs the BoP. From our findings, we argue that the use of the ‘cooperative model’ by dairy companies such as Amul helps in creating shared value by delivering both on social and economic value forms. The model ensures maximum procurement prices for suppliers and focuses on the improving productivity thereby helping improving incomes and livelihoods for the bottom of the pyramid.

6.2 Theoretical and Practical Implications

This study is grounded on a framework that is drawn from different theoretical frameworks which include macroeconomic trends in emerging markets, sustainable business models, shared value creation and corporate social responsibility, and BoP. The outcome of the study highlights the relationship between the different frameworks and pinpoints to the major macroeconomic trends that have influenced the adoption of SBMs to deliver on social value for the BoP. The major aspects emerging from the findings are that for the main macroeconomic trends influencing the adoption of SBMs are: political factors mainly through government programs and policies and leveraging on technologies to build suppliers’ capacity, hence boosting production volumes for companies while simultaneously delivering on social value by improving the livelihoods for the BoP. Additionally, the use of the cooperative

business model has emerged as a sustainable strategy that businesses can use to create share value.

The outcome of this thesis indicates how the current macroeconomic trends in emerging markets are causing businesses to adopt sustainable business models and has practical implications for companies especially in EMs where the BoP represents a major part of the market. It is important for managers and businesses to be constantly aware of the major trends within the external environment such as the government's policies, new legislation and new technologies. Managers should be able to assess how such trends push or influence them to use sustainable business models to be profitable while simultaneously delivering on environmental and social value. The BoP is very significant especially for businesses relying on them as suppliers for their raw materials, hence the need to focus on creating shared value through practices such as streamlined procurement and building local capacity. The cooperative model is a business model that managers should consider while operating in emerging markets where poverty eradication is an issue. The cooperative business model can be a valuable tool in building sustainable businesses through creating shared value, therefore playing an important role in the country's socio-economic development.

6.3 Limitations and Future Research

First, due to resource and time constraints, we have focused on two major Indian companies that we believe are representative of the dairy industry. However, there are other relevant companies such as multinationals that can give other perspectives and outcomes different than the ones identified by our research. Moreover, focusing on only two cases in only one industry can be a barrier for generalizability of the findings to emerging markets. Therefore, future research can focus on different industries and other emerging markets which might help increase the generalizability of findings.

Additionally, in our interviews, we focused more on the executives' perspectives and we were unable to provide additional perspectives of lower hierarchical levels. This can be a limitation as the lower level employees might have different perspectives and might know more about specific areas, while top level employees have more of an overall perspective. We were also unable to conduct interviews with farmers, who could have provided insights on how the

programs implemented are helping. Therefore, researching from these different perspectives might provide other insights relevant to the use of SBMs.

In the course of writing this thesis, we have concentrated more on the social value form than the environmental value form. There were varying results on the approach of the two dairy companies to environmental sustainability, yet statistics indicate that dairy is a resource intensive industry and that it is among the industries contributing to climate change. We would propose further research on environmental sustainability in sustainable business models, in dairy and the other sectors that heavily rely on agriculture for raw materials, both in India and other emerging markets.

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Appendix A

INTERVIEW GUIDE 1 - MACROECONOMIC ENVIRONMENT

Please state your position title and explain your role and responsibilities.

What are the major PESTEL trends within the industry ?

- Political – e.g. government policies / initiatives/ quotas and tariffs, NDDB, Ministry of Agriculture, demonetization
- Economic – e.g. rise in incomes, higher GDP
- Social – lifestyle changes, shifts in demand, population growth
- Technological – use of technology – mobile phones, financial access
- Environment – pollution, water scarcity, drought
- Legal e.g. new policies for safety, consumer health, employees

What has been the impact of these trends on the dairy industry – competitiveness, demand and supply – consumers and producers ?

What are the other major changes in consumer trends that have been observed in the past few years and months? What are the main reasons behind the trends ?

How are the trends in consumption for dairy products – the chilled and the ambient milk ?

Is demand for other dairy products such as yoghurts increasing? How is competition for dairy products from other substitutes ?

Is there competition from imported dairy products? How is the company promoting local production and buying ?

What are the main challenges experienced within the dairy industry in India ?

Please explain your views on the state of the dairy industry in India in the next 1 – 5 years

INTERVIEW GUIDE 2 – SUSTAINABILITY AND SUSTAINABLE BUSINESS MODELS

Please explain your understanding of sustainability and sustainable business models.

Please share your thoughts on sustainability as an issue in the Indian market, is it receiving enough attention from everyone - the businesses, governments, society, NGOs ?

Who do you identify as the main stakeholders within the dairy supply chain and why ?

Which stakeholders do you prioritize and why ?

Which are the main sustainability challenges currently faced within the dairy supply chain ?

- Environment - water scarcity, pollution, animal feed, milk wastage, solar energy
- Social - suppliers to consumers, milk quality & safety, poverty in rural areas
- Economic - profitability

How is the business using sustainable business models to address these challenges ? Please give examples

- Minimize pollution
- Improve profitability for farmers
- Minimize costs
- Provide safe and affordable milk to consumers
- Address the concerns of the farmers
- Alleviate poverty in rural areas

Is sustainability as a concept, integrated throughout the dairy value chain ? From suppliers – employees – consumers ?

What are the main challenges experienced with the use and implementation of sustainable business models within the dairy industry?

On the UN sustainable development goals, which goals is the firm working toward achieving and how ?

Does the company produce a sustainability report ? Use of the triple bottom line ?

Are there any sustainability champions/leaders within the company ?

What initiatives is the company taking to help alleviate poverty in India through dairy industry ?