



Athens Journal of Business & Economics



Quarterly Academic Periodical,

Volume 10, Issue 3, July 2024

URL: <https://www.athensjournals.gr/ajbe>

Email: journals@atiner.gr

e-ISSN: 2241-794X DOI: 10.30958/ajbe

Front Pages

RITWIK SASMAL, PINAKI DAS & JOYDEB SASMAL

[Public Policy, Economic Growth and Poverty Alleviation: A Study in the Indian States](#)

MARINE BERTRAND & EKATERINA GLEBOVA

[How Digital Transformation Impacts Customer Experience in the Hard Luxury Industry: Consensus on Omnichannel Strategy](#)

MEHVISH BHAT, ANKUR AGRAWAL & MICHAIL V. BARMPPAS

[Differentiation, Cost Leadership, or Ending Up in the Middle? A Reflection on the Viability of Porter's Generic Strategies through a Case Study Comparison of McDonalds and Starbucks](#)

PETER JONES

[Business Company Approaches to the Protection of Nature and Biodiversity](#)

Athens Journal of Business & Economics

Published by the Athens Institute for Education and Research (ATINER)

Editor

- Dr. Gregory T. Papanikos, President of ATINER and Honorary Professor of Economics, University of Stirling, U.K.

Co-Editors

- Dr. Stavroula Malla, Academic Member, ATINER & Associate Professor, University of Lethbridge Canada.
- Dr. Nicholas Marudas, Head, Accounting Unit, ATINER & Associate Professor, Mercer University, USA.
- Dr. Christos Sakellariou, Vice President of Finance, ATINER & Associate Professor of Economics, Nanyang Technological University, Singapore.
- Dr. Henry Thompson, Head, Economics Unit, ATINER & Emeritus Professor, Auburn University, USA.

Editorial & Reviewers' Board

<https://www.athensjournals.gr/ajbe/eb>

Administration of the Journal

1. Vice President of Publications: Dr Zoe Boutsoli
2. General Managing Editor of all ATINER's Publications: Ms. Afrodete Papanikou
3. ICT Managing Editor of all ATINER's Publications: Mr. Kostas Spyropoulos
4. Managing Editor of this Journal: Ms. Victoria McKinley Bigelow

ATINER is an Athens-based World Association of Academics and Researchers based in Athens. ATINER is an independent and non-profit Association with a Mission to become a forum where Academics and Researchers from all over the world can meet in Athens, exchange ideas on their research and discuss future developments in their disciplines, as well as engage with professionals from other fields. Athens was chosen because of its long history of academic gatherings, which go back thousands of years to Plato's Academy and Aristotle's Lyceum. Both these historic places are within walking distance from ATINER's downtown offices. Since antiquity, Athens was an open city. In the words of Pericles, Athens "...is open to the world, we never expel a foreigner from learning or seeing". ("Pericles' Funeral Oration", in Thucydides, The History of the Peloponnesian War). It is ATINER's mission to revive the glory of Ancient Athens by inviting the World Academic Community to the city, to learn from each other in an environment of freedom and respect for other people's opinions and beliefs. After all, the free expression of one's opinion formed the basis for the development of democracy, and Athens was its cradle. As it turned out, the Golden Age of Athens was in fact, the Golden Age of the Western Civilization. Education and (Re)searching for the 'truth' are the pillars of any free (democratic) society. This is the reason why Education and Research are the two core words in ATINER's name.

The *Athens Journal of Business & Economics (AJBE)* is an Open Access quarterly double-blind peer reviewed journal and considers papers from all areas of business and economics, including papers on accounting, finance, management, marketing, organization etc. The AJBE welcomes theoretical (including methodological), empirical (including case-studies) and policy (i.e., descriptive and non-analytical) papers. Given the mission of ATINER, the AJBE will also consider papers which emphasize country-related studies both at the business and the national economy level as well as economic history, history of economic thought and philosophy of economics papers. All papers are subject to ATINER's [Publication Ethical Policy and Statement](#).

The Athens Journal of Business & Economics
ISSN NUMBER: 2241-794X- DOI: 10.30958/ajbe
Volume 10, Issue 3, July 2024
Download the entire issue ([PDF](#))

Front Pages i-viii

**Public Policy, Economic Growth and Poverty Alleviation:
A Study in the Indian States** 159

Ritwik Sasmal, Pinaki Das & Joydeb Sasmal

**How Digital Transformation Impacts Customer
Experience in the Hard Luxury Industry:
Consensus on Omnichannel Strategy** 183

Marine Bertrand & Ekaterina Glebova

**Differentiation, Cost Leadership, or Ending Up in the
Middle? A Reflection on the Viability of Porter's Generic
Strategies through a Case Study Comparison of
McDonalds and Starbucks** 217

Mehvish Bhat, Ankur Agrawal & Michail V. Barmpas

**Business Company Approaches to the Protection of
Nature and Biodiversity** 239

Peter Jones

Athens Journal of Business & Economics

Editorial and Reviewers' Board

Editor

- **Dr. Gregory T. Papanikos**, Honorary Professor, University of Stirling, UK & President of ATINER.

Co-Editors

- **Dr. Stavroula Malla**, Academic Member, ATINER & Associate Professor, University of Lethbridge Canada.
- **Dr. Nicholas Marudas**, Head, Accounting Unit, ATINER & Associate Professor, Mercer University, USA.
- **Dr. Christos Sakellariou**, Vice President of Administration and Finance, ATINER & Associate Professor of Economics, Nanyang Technological University, Singapore.
- **Dr. Henry Thompson**, Head, Economics Unit, ATINER & Emeritus Professor, Auburn University, USA.

Editorial Board

- Dr. Panagiotis Petratos, Vice President of ICT, ATINER & Professor, Department of Computer Information Systems, California State University (Stanislaus), USA.
- Dr. Michael P. Malloy, Director, **Business & Law Research Division**, ATINER & Distinguished Professor of Law, University of the Pacific, USA.
- Dr. Peter Koveos, Head, **Accounting & Finance Research Unit**, ATINER & Professor of Finance, Syracuse University, USA.
- Dr. Sharon Claire Bolton, Head, **Management Research Unit**, ATINER & Professor, The Management School, University of Stirling, Scotland.
- Dr. Cleopatra Veloutsou, Head, **Marketing Research Unit**, ATINER & Professor of Brand Management, University of Glasgow.
- Dr. John Thanopoulos, Professor of International Business (IB), and Dean, Business and Economics, IST College & Emeritus Professor, University of Piraeus, Greece.
- Dr. Elyas Elyasiani, Professor Finance and Economics, Fox School of Business and Management, Temple University, USA.
- Dr. Eduardo Segarra, Academic Member, ATINER & Professor, Department of Agricultural & Applied Economics, Texas Tech University, USA.
- Dr. Samuel Seaman, Academic Member, ATINER & Professor of Decision Sciences, Graziadio School of Business and Management, Pepperdine University, USA.
- Dr. Hercules Haralambides, Academic Member, ATINER & Professor of Maritime Economics and Logistics, Department of Econometrics, Erasmus University Rotterdam, The Netherlands.
- Dr. Steven Dellaportas, Academic Member, ATINER & Professor of Accounting, RMIT (Royal Melbourne Institute of Technology) University, Australia.
- Dr. George V. Priovalos, Professor, Iona College, USA.
- Dr. George Saridakis, Director of Doctoral Programmes, Kingston Business School, Kingston University & Professor of Small Business and Entrepreneurship, Kingston Hill, Kingston Upon Thames, UK.
- Dr. Liliana Costa, Tutor, Department of Communication and Art, University of Aveiro, Portugal.
- Dr. Gilles Chemla, Academic Member, ATINER & Professor, Imperial College Business School, UK.
- Dr. Nathalie Homlong, Associate Professor, University College Volda, Norway.
- Dr. Tatyana Boikova, Associate Professor, Business Administration Department, Baltic International Academy, Latvia.
- Dr. Zubin Sethna, Associate Professor of Entrepreneurial Marketing, Regent's University London, UK.

- **General Managing Editor of all ATINER's Publications:** Ms. Afrodete Papanikou
- **ICT Managing Editor of all ATINER's Publications:** Mr. Kostas Spyropoulos
- **Managing Editor of this Journal:** Ms. Victoria McKinley Bigelow ([bio](#))

Reviewers' Board

[Click Here](#)

President's Message

All ATINER's publications including its e-journals are open access without any costs (submission, processing, publishing, open access paid by authors, open access paid by readers etc.) and is independent of presentations at any of the many small events (conferences, symposiums, forums, colloquiums, courses, roundtable discussions) organized by ATINER throughout the year and entail significant costs of participating. The intellectual property rights of the submitting papers remain with the author. Before you submit, please make sure your paper meets the [basic academic standards](#), which includes proper English. Some articles will be selected from the numerous papers that have been presented at the various annual international academic conferences organized by the different divisions and units of the Athens Institute for Education and Research. The plethora of papers presented every year will enable the editorial board of each journal to select the best, and in so doing produce a top-quality academic journal. In addition to papers presented, ATINER will encourage the independent submission of papers to be evaluated for publication.

The current issue is the third of the tenth volume of the *Athens Journal of Business & Economics (AJBE)*, published by the [Business & Law Division](#) and the [Economics Unit](#) of ATINER.

Gregory T. Papanikos
President
ATINER



Athens Institute for Education and Research

A World Association of Academics and Researchers

18th Annual International Symposium on Economic Theory, Policy and Applications 11-14 July 2024, Athens, Greece

The [Economics Unit](#) of ATINER, will hold its **18th Annual International Symposium on Economic Theory, Policy and Applications, 11-14 July 2024, Athens, Greece** sponsored by the [Athens Journal of Business & Economics](#). The aim of the conference is to bring together academics and researchers of all areas of economics and other related disciplines. You may participate as panel organizer, presenter of one paper, chair a session or observer. Please submit a proposal using the form available (<https://www.atiner.gr/2024/FORM-ECO.doc>).

Academic Members Responsible for the Conference

- Dr. Gregory T. Papanikos, President, ATINER & Honorary Professor, University of Stirling, UK.
- Dr. Henry Thompson, Head, [Economics Unit](#), ATINER & Emeritus Professor, Auburn University, USA.
- Dr. Chris Sakellariou, Head, Economics Unit & Associate Professor of Economics, Nanyang Technological University, Singapore.

Important Dates

- Abstract Submission: **DEADLINE CLOSED**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **13 June 2024**

Social and Educational Program

The Social Program Emphasizes the Educational Aspect of the Academic Meetings of Atiner.

- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit
- Ancient Corinth and Cape Sounion

Conference Fees

Conference fees vary from 400€ to 2000€
Details can be found at: <https://www.atiner.gr/fees>



Athens Institute for Education and Research

A World Association of Academics and Researchers

12th Annual International Conference on Business, Law & Economics **5-8 May 2025, Athens, Greece**

The [Business, Economics and Law Division](#) (BLRD) of ATINER is organizing its **12th Annual International Conference on Business, Law & Economics, 5-8 May 2025, Athens, Greece**, sponsored by the [Athens Journal of Business & Economics](#) and the [Athens Journal of Law](#). In the past, the [six units](#) of BLRD have organized more than 50 annual international conferences on accounting, finance, management, marketing, law and economics. This annual international conference offers an opportunity for cross disciplinary presentations on all aspects of business, law and economics. This annual international conference offers an opportunity for cross disciplinary presentations on all aspects of business, law and economics. Please submit an abstract (email only) to: atiner@atiner.gr, using the abstract submission form (<https://www.atiner.gr/2025/FORM-BLE.doc>)

Important Dates

- Abstract Submission: **1 October 2024**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **7 April 2025**

Academic Member Responsible for the Conference

- **Dr. Gregory T. Papanikos**, President, ATINER.
- **Dr. Michael P. Malloy**, Director, [Business, Economics and Law Division](#), ATINER & Distinguished Professor & Scholar, University of the Pacific, USA.
- **Dr. David A. Frenkel**, LL.D., Head, [Law Research Unit](#), ATINER & Emeritus Professor, Law Area, Guilford Glazer Faculty of Business and Management, Ben-Gurion University of the Negev, Beer-Sheva, Israel.

Social and Educational Program

The Social Program Emphasizes the Educational Aspect of the Academic Meetings of Atiner.

- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit
- Ancient Corinth and Cape Sounion

More information can be found here: <https://www.atiner.gr/social-program>

Conference Fees

Conference fees vary from 400€ to 2000€

Details can be found at: <https://www.atiner.gr/fees>

Public Policy, Economic Growth and Poverty Alleviation: A Study in the Indian States

By Ritwik Sasmal^{*}, Pinaki Das[±] & Joydeb Sasmal[°]

This paper examines the public policy and allocation of funds of the government and their effects on growth and reduction of poverty in the Indian context. Growth is very important for poverty alleviation but only growth is not always sufficient for reduction of poverty. The increase in income and economic growth need to be supplemented by distributive and welfare measures for the poor. The theoretical and empirical results of this study suggest that capital expenditure and public expenditure on infrastructure are more effective in promoting growth and reducing poverty compared to expenditures for social sector development. So, the major thrust should be on growth without undermining the policy measures for social welfare.

Keywords: capital expenditure, social expenditure, infrastructure, growth, direct benefits, poverty

JEL Classification: H₁₁, H₅₄, O₂₃

Introduction

The rapid economic growth and alleviation of poverty are the two main objectives in any developing country. The public policies are designed and the resources are allocated accordingly to achieve these goals. In India poverty has declined from 60% in 1950s and 1960s to 21.9% in 2011-12 (Source: Press Note of the Planning Commission on poverty 2011-12, Government of India, 2013). Poverty in head-count ratio varies from 9% to 34% across the states of India according to the estimates of 2011-12. Both economic growth and welfare measures of the government are attributed to this decline of poverty in the country. Poverty has been defined and measured in various ways. Sen's (1981) head-count ratio is a very commonly used measure of poverty. It is estimated on the basis of a poverty line. The poverty line is the minimum income of the household necessary to fulfill the basic needs of livelihood. If the income of the family is below this minimum level, the family is said to be poor. The World Bank takes 2 US dollar per person per day as the measure of poverty line. This line varies across countries depending on cost of living and other local factors. This paper is concerned with the policy measures of the government towards growth and poverty alleviation in the Indian context. Although this study is being conducted in the Indian context, it will have great policy relevance for similar countries of the developing world. It

^{*}PhD Scholar, Department of Economics, Vidyasagar University, India.

[±]Professor, Department of Economics, Vidyasagar University, India.

[°]Professor (Retired), Department of Economics, Vidyasagar University, India.

focuses on the role of public expenditure and public policy in accelerating growth and reducing poverty. How the composition and pattern of public expenditure impact growth is an important query of this study. Since economic growth is very important for poverty alleviation this study examines the effect of public expenditure on poverty through its effect on economic growth. There are two main approaches to poverty alleviation – (i) economic growth and (ii) direct attack on poverty through welfare and distributive measures. In the first approach, reduction of poverty is the outcome of economic growth. It hypothesizes that if there is growth, the benefits of higher income will trickle down to the poor in the form of meaningful employment, higher wage and income and higher productivity. As a result, poverty will decline. The second approach is considered to be a direct route to poverty alleviation. The benefits of economic growth do not always reach the poor due to various reasons or constraints. In that case, policy measures are required to provide socio-economic benefits to the poor directly through welfare and distributive schemes. India is experiencing high rate of growth in the last three decades (annual growth rate is 7-8% on an average) after the adoption of liberalized economic policy in 1991. Despite this growth nearly 30 crores or more population of the country are still under severe poverty (exact data on poverty in India after 2011-12 are not available). In this perspective, the planners and policy makers are continuously focusing on the requirement of inclusive growth. In designing such a model, the nature of public expenditure and public policy can play an important role and fiscal instruments can be effective in promoting growth and reducing poverty. It is suggested that side by side with adopting policies for accelerating growth there should be effective welfare and distributive measures for directly providing socio-economic benefits to the target groups. Many such welfare schemes have already been adopted in the country. So, the objective of this paper is (i) to examine the effect of public expenditure on economic growth and (ii) to see how economic growth and welfare measures of the government can help reduction of poverty. The research question here is basically the policy choice of the government to address the problems of economic growth and poverty alleviation using fiscal instruments. As per classification of the Reserve Bank of India (RBI) the total expenditure of the government is broadly divided in two parts: (i) capital expenditure and (ii) revenue expenditure. The first component of the expenditure helps long term economic growth through capital formation, development of infrastructure and technological progress. The revenue expenditure, on the other hand, includes salary, wage, pension, subsidy, allowances, direct transfers to the people and interest payment on public debt which are largely distributive in nature. The share of revenue expenditure in the total spending of the government both at the centre and in the states of India has increased to more than 80 per cent. The share of social sector expenditure in total spending is also very high in the country. In this background, to examine the effect of public expenditure on economic growth and poverty alleviation is very relevant and worthy for an in-depth study. The issues of public expenditure, growth and poverty will be addressed in this research both theoretically and empirically using state level data in the Indian context.

Literature Review

There is a rich literature on public expenditure, growth and poverty alleviation. We can have deeper insights from important studies in this area of research. Aschauer (1989) examines the effect of public expenditure on growth via its impact on productivity and the study shows that stock of public capital like roads and highways, airports, water management system are very important for productivity and growth in the economy. Barro (1990) shows in his important paper on endogenous growth with government spending that public expenditure enhances growth by increasing the efficiency of labour. Meltzer and Richard (1981) have defined size of the government by the ratio of public expenditure to GDP and using Median Voter theory, demonstrated that if inequality is high in the society, there will be demand for a larger government. To finance greater spending of the government, tax burden will be higher and this will adversely affect economic growth. Similar arguments have been put forward by Alesina and Rodrik (1994) and Persson and Tabellini (1994). The public expenditures on health, education, nutrition and community development helps growth side by side with increasing social welfare. In this context, Banerjee and Newman (1993) and Galor and Zeira (1993) have argued that if social expenditure can increase productivity and social development then it can help economic growth. Therefore the allocation of funds among various heads and the composition of public expenditure are very important both for growth and poverty alleviation. Devarajan et al. (1996) have shown in a study based on cross country data that the current expenditure of the government is more productive for growth than capital expenditure. Barro (1991) and Chen (2006) have, however, obtained opposite results and shown that capital expenditure of the government has greater impact on growth. Agenor (2008) shows that public expenditure can help economic growth only when it creates infrastructure for education and human skill formation. The formation of human capital has important role in economic growth (Lucas 1988). Using the framework of Lucas (1988) in modified form, Sasmal and Sasmal (2023) have shown that social expenditure of the government accelerate growth by facilitating human capital formation. Shafuda and De (2020) have examined the effect of public expenditure on the indicators of human development in Namibia and obtained mixed results. The literacy rate and net enrolment at the primary level have been found to be related with public expenditure. It is found that public expenditure on education and health has significant impact on GDP. Owino (2017) shows that public expenditure in the social sector, especially investment on education, has positive impact on per capita GDP. The expenditure on health and social security is, however, found to have dampened growth.

Leeper et al. (2010) have examined the effect of public investment on growth using a neoclassical theoretical framework. This study shows that public capital is important for growth but delay in implementation of public projects or not adopting proper method of financing public projects may have negative impact on growth. Afonso and Furceri (2010) have shown that size and volatility of revenues and expenditure of the government have negative impact on growth. Zhang (2015) has shown in a multi-sector endogenous growth model that the effect of public

expenditure on productivity is different in different sectors and this results in changes in factor prices and structural change. Some important works are available on the relationship between public expenditure and economic growth in the Indian context. Marjit et al. (2020) show that the government has a tendency to allocate more funds for distributive purposes to increase its electoral gain. Using theoretical model and econometric results in the Indian context this study concludes that capital expenditure has a greater positive impact on per capita income as compared to revenue expenditure. Mahapatra and Giri (2016) show that non-developmental expenditures and revenue expenditures have no significant effect on growth in India while the study of Gangal and Gupta (2013) finds positive impact of total public expenditure on GDP in the country. The time series analysis of Ahmad (2014) shows that public expenditure and GDP in India are cointegrated. But in the test of causality, it is found that GDP causes public expenditure, not the other way around.

Collier (1998) shows that social capital plays important role in growth and poverty alleviation. The collective action of the civil society, interaction and dissemination of information and knowledge among the individuals and greater trust among the people can enhance efficiency of public expenditure and reduce transaction cost in the society. This helps economic growth and reduction of poverty. Adjasi and Osei (2007) show that education and professional status are important in reducing poverty. This hints at the importance of higher efficiency and income in the reduction of poverty. Mauro (1995) shows that if corruption is higher in the society it will have adverse impact both on poverty and growth. The reason is the leakage of funds as a result of corruption. Although the debate on growth vs. direct measures persists in the literature and growth is not always sufficient for reduction of poverty economic growth is necessary and very important for reduction of poverty. Lustig (2002) shows that economic growth is a crucial factor in poverty alleviation but level of inequality and its evolution determine its impact on poverty. In a study of two-way causality between growth and poverty the author shows that growth can reduce poverty and poverty also can dampen growth. It is found that the formation of human capital from health and education leads to higher productivity and growth but there may be various constraints towards human capital formation. However, mere increase of per capita income may not be successful in reducing poverty if growth process bypasses the geographic areas or sectors in which the poor are concentrated. Thus this study signifies that where and for whom the growth is taking place is very important for poverty alleviation.

Son and Kakwani (2004) demonstrate how the relation between growth and poverty can change with the initial levels of development and inequality. They have used the concept of 'poverty elasticity of growth' which measures the extent to which poverty declines as a result of economic growth. This study shows that the initial development conditions and the degree of inequality have significant impact on the reduction of poverty. The emerging consensus is that growth alone is rather a blunt tool for poverty reduction. Along with growth the policies to ensure redistribution of income and wealth have become increasingly more important. So, the policy towards the goal of poverty alleviation through growth

must incorporate the mechanism of redistribution. Different countries have different initial conditions and the trade-off between poverty and growth can be explained by initial conditions of development and the degree of inequality in the countries. The measure of inequality is an important basis for estimating poverty in the growth process. The growth can be termed as pro-poor if it reduces inequality and it indicates that poor people are more benefitted from growth than the non-poor section of the population. Even pro-poor growth may fail to reduce poverty unless appropriate strategies are adopted to reduce inequality in the growth process. In a study on poverty and public policy Bhagwati (1988) mentions two ways of reducing poverty: (i) indirect route: it is a way of addressing poverty through economic growth. It suggests the use of resources to accelerate growth and thereby impact poverty through higher income and better standard of living of the poor. (ii) The second method is direct route – it is the public provision of providing minimum need based health, education, nutrition, housing facilities to the poor. In both approaches, there is biasing or targeting. In his view, an optimal mix-up of these two approaches is very important. The questions of gainful employment and rise in productivity are also associated with this policy. The economic and political factors may constrain the effectiveness of growth in reducing poverty. Therefore, it is suggested that the growth process needs to be supplemented by suitable public policies to prevent unpleasant outcomes.

Mulok et al. (2012) have shown that poverty has significantly declined in Malaysia in the last five decades. While focusing on the relationship between growth and poverty, their study finds that in the reduction of poverty, growth explains much, but not all. Their assertion is that economic growth is necessary but not sufficient for reduction of poverty. The study suggests that if reduction of poverty is the goal, both growth and poverty alleviation should be taken into consideration simultaneously. Economic growth increases per capita income but unless the income is distributed properly, poverty cannot decline even with growth. So, the degree of inequality is very important in determining the size of reduction of poverty. Ahluwalia (1976) has conducted a multivariate regression on the relationship between income distribution and development using data from 60 countries. It was found that relative inequality had increased with rise in per capita income in the process of economic development. Such development is unlikely to reduce poverty. Anand and Kanbur (1993) have further digressed on the relationship between growth and inequality using the Kuznets process. Kuznets has discussed the process of population shift from traditional sector to modern activities as the basis of distributional change and this has impact on the relationship between economic growth and income inequality. This work has the implication that as population are shifted from low-productive agriculture to modern sectors during the growth process, the pattern of income distribution changes and it determines the level of poverty. Ravallion and Chen (1997) have shown in a cross-country analysis that one per cent increase in per capita income results in 3.1 per cent decline in the size of population below poverty line. This indicates that growth has very significant impact on poverty alleviation. The importance of growth in the reduction of poverty has been further highlighted by Chen and Ravallion (2004) in a similar study. This has shown that poverty has declined by 200 million population

worldwide at the end of 20th century compared to the figure 20 years ago and growth has played an important role in this reduction of poverty. With respect to the role of macro policy in poverty reduction Ames et al. (2001) have analysed the role of monetary, fiscal and trade policies in growth and reduction of poverty. In respect of fiscal policy, in particular, this study states that not only the appropriateness of spending programmes for reduction of poverty, but also the various aspects of growth and distributional change should be given equal importance. In the study of Sasmal and Sasmal (2016) in the Indian context, it is found that economic growth has significant negative effect on poverty and to accelerate growth public expenditure on infrastructure has a vital role. The present work will address these issues by providing a theoretical mechanism to explain growth from public expenditure and verifying the theoretical arguments by empirical findings in the Indian context.

The Research Gaps and Scope for Further Studies

1. The existing studies have analysed the issues like public expenditure and growth, growth and poverty, public expenditure and poverty separately although these issues are closely interlinked with each other. So, it will be worth-doing to address and analyse these issues in an integrated framework.
2. There are theoretical models on the relationship between public expenditure and growth. But there is hardly any theoretical structure to provide mechanism through which growth leads to reduction of poverty or government measure directly impacts poverty.
3. There is good number of studies on this issue in the Indian context but almost all of them are lacking theoretical backup on the basis of which empirical studies can be analysed.
4. India is an important emerging country in the world that has recorded 7-8% annual growth (at constant prices) in the last three decades and in recent times the economy is growing at a rate of above 6% per annum when most of the countries are struggling to achieve 2-3% growth annually. In addition to this, a large number of welfare schemes are being implemented in the country for the betterment of the weaker section of the population. Despite that, a sizeable portion of the total population is still poor and depending largely on the government for free food, housing, and medical facilities. So, definitely there is scope and need for deeper investigation into this problem.
5. India is a vast country with its huge potential and resources for future growth. The results based on theoretical arguments and empirical findings in the Indian context in this study can suggest policy formulation for growth and poverty alleviation in other countries by using fiscal instruments.

The Theoretical Framework

The Model

Following Barro (1990), Agenor (2008) and Marjit et al. (2020) a production function has been considered in Cobb-Douglas form with CRS as

$$Y = AK^\alpha G_1^\beta (LG_2)^{1-\alpha-\beta} \quad (1)$$

Where Y is output, K is private capital and L is labour. G_1 is public expenditure on productive services for long-term growth and it helps economic growth through capital formation, infrastructure, technology and scientific knowledge. G_1 may be considered as capital expenditure of the government. G_2 increases social welfare and also helps economic growth by enhancing efficiency of labour. It includes expenditures on health, education, human skill formation and social development. G_2 may be conceived as revenue expenditure of the government and it has a dual role in socio-economic development. Apart from enhancing production through higher productivity of labour, G_2 directly renders utility to the households. Following Barro (1990) L may be assumed to be constant. A is given technological efficiency in production. The parameters α , β and $1 - \alpha - \beta$ are production elasticities of K , G_1 and G_2 respectively.

As in growth models of Barro (1990), Devarajan et al. (1996) and Agenor (2008) it is assumed that the government follows a balanced budget expenditure policy although in practice, most of the countries in the world follow deficit budget and resort to the policy of public debt. So, here the total tax revenue (T) is equal to total expenditure of the government (G). It is also assumed that tax is collected from income only at a constant tax rate τ . Therefore, $T = \tau \cdot Y$. Now, total tax proceeds is allocated between G_1 and G_2 . In countries like India, a greater share of development expenditure is allocated to G_2 . This may be due to high levels of poverty and social backwardness. There may be some political compulsions also (Marjit et al., 2000). Let the share of G_1 in total public expenditure be λ . Then,

$$\lambda G_1 + (1 - \lambda) G_2 = G = T = \tau \cdot Y \quad (2)$$

In the same way the fund may be allocated between (i) infrastructure and (ii) social sector development also. The households derive utility from consumption (C) and G_2 .

The utility from G_2 may be derived both in separable and non-separable forms with consumption. Following Bruce and Turnovsky (1999), we consider utility function of the household in non-separable form as

$$U = \frac{(CG_2^\phi)^{1-\theta}}{1-\theta} \quad (3)$$

where C is consumption and $\sigma = \frac{1}{\theta}$ is the constant elasticity of substitution in intertemporal consumption. Actually the households derive utility from private consumption jointly with various government facilities and benefits. φ is the measure of utility derived by the households from G_2 . The government may allocate a greater share of the available fund to G_2 if the households derive higher utility from G_2 and there is greater social demand for distributive and welfare measures from the government. The budget constraint of the household is

$$Y = C + \dot{K} + T \quad (4)$$

Here, $\dot{K} = \frac{dK}{dt} = I$

Equation (4) follows from $Y = C + S + T$, where $S = I$ and $T = \tau \cdot Y$

Again, equation (4) can be expressed as the dynamics of capital accumulation:

$$\dot{K} = (1 - \tau) Y - C \quad (5)$$

Given τ and λ the objective of the household in a decentralized framework is the maximization of discounted total utility in a dynamic perspective over an infinite planning horizon, i.e.,

$$\text{Max } V = \int_0^{\infty} \left[\frac{(CG_2^\varphi)^{1-\theta}}{1-\theta} \right] e^{-rt} \cdot dt \quad (6)$$

s.t. $\dot{K} = (1 - \tau) Y - C$
and transversality conditions.

i.e., the households maximize discounted total utility (V) in an infinite planning horizon subject to the constraints and transversality conditions.

Here, r is the rate of discount of future utility. This dynamic optimization problem can be solved by using maximum-principle of optimal control theory. Now following Chiang (1992), we can take the current-value Hamiltonian as

$$H = \frac{(CG_2^\varphi)^{1-\theta}}{1-\theta} + \eta \left[(1 - \tau) A K^\alpha G_1^\beta (LG_2)^{1-\alpha-\beta} - C \right] \quad (7)$$

Here, K is the state variable and η is the costate variable. η is the shadow price of K and C is the control variable.

The F.O.C.s for maximization of H are:

$$\frac{\partial H}{\partial C} = (CG_2^\varphi)^{-\theta} \cdot G_2^\varphi - \eta = 0 \quad (8)$$

$$-\frac{\partial H}{\partial K} = \dot{\eta} = r\eta - \eta \left[(1-\tau) \frac{\partial Y}{\partial K} \right] \quad (9)$$

$$\frac{\partial H}{\partial \eta} = \dot{K} = (1-\tau)Y - C \quad (10)$$

The transversality conditions are:

$$\eta(T) \geq 0 \text{ and } \lim_{T \rightarrow \infty} \eta(T) K(T) = 0$$

The S.O.C. is satisfied by strict concavity of H in C and K jointly.

Condition (8) determines optimal C at each point of time. It implies that marginal utility from C will be equal to the shadow price of capital (η) at each point of time. Equations (9) and (10) show the rate of change of η and K respectively over time. Given τ , λ and other parameters, the equations (8) – (10) along with transversality conditions trace out the optimal paths for C, K and other variables.

From (8) we get

$$(CG_2^\varphi)^{-\theta} \cdot G_2^\varphi = \eta \quad (8)'$$

Taking log of (8)' and differentiating w.r.t. time we get

$$-\theta \cdot \frac{\dot{C}}{C} + \varphi(1-\theta) \cdot \frac{\dot{G}_2}{G_2} = \frac{\dot{\eta}}{\eta} \quad (11)$$

In balanced growth, C and G_2 will grow at the same rate. So, $\frac{\dot{C}}{C} = \frac{\dot{G}_2}{G_2}$.

$$\text{Then, } \frac{\dot{C}}{C} \{\theta - \varphi(1-\theta)\} = -\frac{\dot{\eta}}{\eta} \quad (11)'$$

Similarly, equation (9) can be expressed as

$$-\frac{\dot{\eta}}{\eta} = (1-\tau) \frac{\partial Y}{\partial K} - r \quad (12)$$

From equations (11)' and (12) we get the growth rate of C as

$$g = \frac{\dot{C}}{C} = \frac{\{(1-\tau)MP_K - r\}}{\theta - \varphi(1-\theta)} \quad (13)$$

g is the growth rate of consumption. Given the tax rate, allocation of funds between G_1 and G_2 and other parameters, the growth rate depends on the marginal productivity of capital.

In balanced growth, income, consumption, private capital, government spending and other related variables will grow at the same rate, i.e.,

$$\frac{\dot{C}}{C} = \frac{\dot{Y}}{Y} = \frac{\dot{K}}{K} = \frac{\dot{G}_1}{G_1} = \frac{\dot{G}_2}{G_2} = g \quad (14)$$

Therefore, the growth rate in the economy becomes

$$g = \frac{\{(1-\tau)MP_K - r\}}{\theta - \varphi(1-\theta)} \quad (14)'$$

From equation (1) we get

$$MP_K = A\alpha K^{\alpha-1} G_1^\beta (LG_2^{1-\alpha-\beta}) \quad (15)$$

Equation (15) can be expressed as

$$MP_K = B \cdot \alpha \left(\frac{K}{G_2}\right)^\alpha \cdot \left(\frac{G_1}{G_2}\right)^\beta \cdot \left(\frac{G_2}{K}\right) \quad (17)$$

where $B = A \cdot L^{1-\alpha-\beta}$.

Since, K , G_1 and G_2 will grow at the same rate in balanced growth, $\left(\frac{K}{G_2}\right)$, $\left(\frac{G_1}{G_2}\right)$ and $\left(\frac{G_2}{K}\right)$ will be constant. So, MP_K will be constant. Therefore, it satisfies the requirement of endogenous growth.

Now, the growth rate is:

$$g = \frac{\{(1-\tau)(B\alpha K^{\alpha-1} G_1^\beta G_2^{1-\alpha-\beta}) - r\}}{\theta - \varphi(1-\theta)} \quad (17)$$

$$\frac{\partial g}{\partial G_1} = \frac{\{(1-\tau)(B\alpha K^{\alpha-1} \beta G_1^{\beta-1} G_2^{1-\alpha-\beta})\}}{\theta - \varphi(1-\theta)} > 0 \quad (18)$$

Similarly,

$$\frac{\partial g}{\partial G_2} = \frac{\{(1-\tau)(\alpha K^{\alpha-1} G_1^\beta (1-\alpha-\beta) G_2^{-(\alpha+\beta)})\}}{\theta - \varphi(1-\theta)} > 0 \quad (19)$$

From (18) and (19), it follows that both G_1 and G_2 have positive effect on the growth rate. However, out of G_1 and G_2 which one will be more productive in growth depends on their respective production elasticities β and $1-\alpha-\beta$.

If $\beta > 1 - \alpha - \beta$, growth rate will increase if greater share of the available government fund is allocated to G_1 and if economic growth has sufficient trickle down effect it will have a strong effect on poverty alleviation. Then the government policy will be to allocate greater share of the funds to G_1 to reduce poverty. On the other hand, if the social or distributive expenditure G_2 has greater impact on growth, i.e., $(1 - \alpha - \beta)$ is high, the government may increase the share of public expenditure on social sector development.

Another interesting result of this model is that $\frac{\partial g}{\partial \varphi}$ may be positive or

negative. The implication is that if the value of φ is high, it means, the households get higher utility from G_2 . Then the government may be forced to allocate more funds to G_2 whatever may be its effect on growth and poverty alleviation. There will be some political compulsion to allocate more funds to distributive purposes at the cost of long term growth. Whether the growth rate will increase or not depends on $1 - \alpha - \beta$.

For estimation of the production function at the per capita level we can write equation (1) as

$$\frac{Y}{L} = \frac{AK^\alpha G_1^\beta (LG_2)^{1-\alpha-\beta}}{L}$$

or, $y = A' K^\alpha G_1^\beta G_2^{1-\alpha-\beta}$ (20)

where y = per capita income, $A' = A \cdot L^{-(\alpha+\beta)}$ and A' is constant.

Taking log of (20) we can write

$$\log y = \log A' + \alpha \log K + \beta \log G_1 + (1 - \alpha - \beta) \log G_2 \quad (21)$$

In (21) α , β , $(1 - \alpha - \beta)$ are production elasticities of y w.r.t. K , G_1 and G_2 respectively. These parameters can be estimated from data on y , K , G_1 and G_2 .

This theoretical analysis provides analytical framework for the nature of public expenditure and its impact on growth. It also reflects the priorities and policy orientation of the government. The growth has impact on poverty. Also the distributive and social expenditure denoted by G_2 will have direct impact on poverty along with its effect on growth.

Growth and Poverty

Poverty line is defined as the minimum income of the household necessary to meet the basic requirements of livelihood. Let this minimum income be \bar{C} . It is assumed that there is certain portion of the total population whose income is below \bar{C} . They are poor. The income of the poor households is W and $0 < W \leq C$. If W rises as a result of economic growth and W exceeds \bar{C} i.e., $W > \bar{C}$, then poverty declines. If v is the ratio of population below poverty line, then

$$\frac{dv}{dW} < 0 \text{ if } W > \bar{C}$$

From equation (20), per capita income (y) is defined as

$$y = A' K^\alpha G_1^\beta G_2^{1-\alpha-\beta} \quad (22)$$

W can be expressed as a function of y and social expenditure (S) as

$$W = \varepsilon \cdot y^\gamma + \xi \cdot S^\delta \quad (23)$$

where γ is the measure of effect y on W . ε is the indicator of trickle-down effect of growth. If there is growth, y will rise. Then to what extent the benefit of higher y will reach the poor depends on ε . Here it is assumed that $0 \leq \varepsilon \leq 1$ and $0 < \gamma < 1$. Similarly, δ is the measure of effect of G_2 or S on W . It indicates to what extent the social sector expenditure (S) can help the poor. ξ is a coefficient of S that indicates to what extent the benefits of S reach the poor people. Here also, $0 < \delta < 1$ and $0 \leq \xi \leq 1$. These four given parameters will determine whether growth and welfare measures will reduce poverty or not.

In equation (20), per capita income (y) is a positive function of both G_1 and G_2 and their marginal effects on y and β are $1 - \alpha - \beta$ respectively. So,

$$\frac{\partial y}{\partial G_1} > 0, \frac{\partial y}{\partial G_2} > 0.$$

Now, to examine the effect y on W we differentiate (21) w.r.t. y and get

$$\frac{\partial W}{\partial y} = \varepsilon \cdot \gamma \cdot y^{\gamma-1} \quad (24)$$

$\frac{\partial W}{\partial y} \geq 0$. That means, whether W will rise due to rise in y (as a result of growth)

depends on the parameters ε and γ . If the values of ε and γ are high, the increase in y will lead to significant rise of W . As a result, growth will have significant negative impact on poverty. On the other hand, if the benefits of growth does not reach the poor for various reasons, growth will fail to reduce poverty. In that case ε is zero or almost zero.

Similar effects of S on W can be derived from (20). Here also, to what extent social welfare measure will be effective in reducing poverty depends on δ and ξ .

Since $\frac{dv}{dW} < 0$, poverty declines if $\frac{\partial W}{\partial y}$ and $\frac{\partial W}{\partial S}$ are sufficiently positive.

Data and Methodology

The variables used in the panel regressions are: per capita net state domestic product at constant prices ($\ln_pc_nsdp_cnsdp$), capital expenditure (\ln_cap_exp) and revenue expenditure (\ln_rev_exp) of the government, gross capital formation at constant prices (\ln_gcf_cnsdp), the share of public expenditure on infrastructure in total spending of the government (pub_exp_infr), share of industry in net state domestic product (ind_nsdp), social expenditure of the government (\ln_social_exp), poverty ratio (pov_hcr), population density per square kilometre in the state (pop_den_sqm) and literacy rate. The share of agriculture in net state domestic product ($agri_nsdp$), the share of services in net state domestic product ($service_nsdp$), ratio of state gross fiscal deficit to net state domestic product ($sgfd_nsdp_ratio$), ratio of revenue expenditure in total spending of the state ($ratio_re$) and productivity in agriculture per hectare ($agri_prod_hc$) are other important variables or controls. Some variables have been taken in log to estimate elasticity between the variables. Some variables are in ratio or fraction. The sources of these data are 'Handbook of Statistics on State Government Finances', RBI, and 'State Finances – A Study on Budgets', RBI (several issues). Four rounds of state level poverty data are available for panel regression. To avoid the problem of endogeneity, the public expenditures have been taken in 3 years lag in the panel regressions. These have been done in panel regressions of per capita $nsdp$ and poverty on different components of public expenditure like cap_exp , rev_exp , $social_exp$ and pub_exp_infr . To supplement the result of the effect of per capita income on poverty ratio, the average monthly per capita consumption expenditure in rural areas ($ampce_rural$) has been regressed on per capita income (pc_nsdp_cnsdp) and literacy rate using NSS data.

In methodology, panel regression has been done to estimate the effect of government expenditure on per capita income and poverty in the major states of India. The effect of per capita income on poverty has also been estimated along with other controls. Following Wooldridge (2009) both fixed-effects and random-effects models have been estimated. Appropriate model has been selected by Hausman test. Robust standard error test has been done to avoid the problem of heteroscedasticity.

The fixed-effects model has been specified as $Y_{it} = \alpha_0 + \alpha_1 X_{it} + e_{it}$ where Y_{it} is the dependent variable of the i th individual in period t and X_{it} is the i th independent variable in period t and e is the error term. In fixed effect model, the independent variable X and unobserved individual heterogeneity of the i th entity are correlated. In random-effects model, they are uncorrelated although specification of the equation is same.

The following equations have been estimated:

- (i) $\ln_pc_nsdp_cnsdp = \alpha_0 + \alpha_1 \ln_gcf_cnsdp + \alpha_2 \ln_cap_exp + \alpha_3 ind_nsdp + e$
- (ii) $\ln_pc_nsdp_cnsdp = \alpha_0 + \alpha_1 \ln_gcf_cnsdp + \alpha_2 \ln_rev_exp + \alpha_3 ind_nsdp + e$
- (iii) $\ln_cap_exp = \alpha_0 + \alpha_1 sgfd_nsdp_ratio + \alpha_2 ind_nsdp + e$
- (iv) $pov_hcr = \alpha_0 + \alpha_1 \ln_pc_nsdp_cnsdp + \alpha_2 agri_nsdp + \alpha_3 pop_den_sqm + e$
- (v) $pov_hcr = \alpha_0 + \alpha_1 pub_exp_infr + \alpha_2 \ln_social_exp + \alpha_3 ind_nsdp + e$
- (vi) $pov_hcr = \alpha_0 + \alpha_1 pop_den_sqm + \alpha_2 service_nsdp + \alpha_3 agri_prod_hc + e$

$$(vii) \ln_social_exp = \alpha_0 + \alpha_1 sgfd_nsdp_ratio + \alpha_2 agri_nsdp + \alpha_3 ratio_re + e$$

$$(viii) ampce_rural = \alpha_0 + \alpha_1 pc_nsdp_cnsdp + \alpha_2 literacyrate$$

These equations have been estimated in panel regressions in Tables 2-6.

Empirical Results and Discussion

Table 1 shows per capita net state domestic product at constant prices (pc_nsdpcnsdp) and the ratio of poverty in total population in the major states of India at different points of time. It is found that per capita income has increased in all the states in the last three decades. In some states like Haryana, Gujarat, Maharashtra, Tamil Nadu, Karnataka, Kerala and Himachal Pradesh, the increase in per capita income is very remarkable. In some of these growing states poverty has significantly declined whereas in some important states like Maharashtra, Gujarat, Karnataka where growth is very high, poverty has not declined to that extent. Punjab and Rajasthan have done well in poverty alleviation. The performance of Odisha is impressive in respect of growth but its poverty is still very high. The states like Tamil Nadu, Kerala, Himachal, Andhra Pradesh and Rajasthan have done very well both in growth and poverty alleviation. There has been no official survey on poverty after 2011-12. So, whether poverty has declined or not in the states with growth in the later phase is not clear. In states like Bihar, Uttar Pradesh, Assam and also in West Bengal, per capita income is low and poverty is high.

Table 1. Per Capita Net State Domestic Product at Constant Prices and Ratio of Poverty in the Major States of India at Different Points of Time

States	Per capita net state domestic product (nsdp) at constant prices (Rupees) #			Poverty ratio as total population in the state (%) **	
	Year			Year	
	1991-92 (base: 1980-81)	2011-12 (base: 2011-12)	2018-19 (base: 2011-12)	1993-94	2011-12
Andhra Pradesh	2134	69000	108853	44.6	9.2
Assam	1575	41142	59943	51.8	32.0
Bihar	1105	21750	29092	60.5	33.7
Gujarat	2381	87481	154887	37.8	16.6
Haryana	3499	106085	166747	35.9	11.2
Himachal Pradesh	2213	87721	136288	34.6	8.1
Jammu & Kashmir	1779	51775	69183	26.3	10.4
Karnataka	2262	90263	148645	49.5	20.9
Kerala	1826	97912	147347	31.3	7.1
Madhya Pradesh	1538	38497	59000	44.6	31.7
Maharashtra	3399	99597	142063	47.9	17.4
Odisha	1530	48387	75421	59.1	32.6
Punjab	3825	85577	115592	22.4	8.3
Rajasthan	1755	57192	73529	38.3	14.7
Tamil Nadu	2270	93112	141844	44.6	11.3
Uttar Pradesh	1627	32002	42333	48.4	29.4
West Bengal	2267	51543	68212	39.4	20.0
All India	7690 *	63462	92133	45.3	21.9

Source: Handbook of Statistics on Indian Economy, RBI, 2009-10, 2022.

*Figure in 1993-94 at 1993-94 prices (in the absence of All India figure at base price of 1980-81).

**Source: Ahluwalia (2011), Economic and Political Weekly, 46 (21) and Press Note on Poverty Estimates, 2011-12, Planning Commission, Government of India, July, 2013.

In Table 2 panel regression of per capita income at the state level (pc_nsdp_cnsdp) has been regressed on capital expenditure and revenue expenditure (rev_exp) of the government ($capl_exp$), gross capital formation at constant prices (gcf_cnsdp) and industrialization in the state in two separate equations. Since rev_exp and cap_exp are correlated separate equations have estimated to avoid the problem of multicollinearity. Since pc_nsdp_cnsdp , $capital_exp$ and gcf_cnsdp are in log, their regression coefficients give elasticity of state per capita income w.r.t. capital expenditure and gross capital formation. The estimated values are 0.45 and 0.27 respectively. That means, both capital expenditure and gross capital formation have significant positive impact on per capita income. Industrialisation has no significant impact on per capita income. Therefore, it follows that both capital expenditure of the government (G_1) and gross capital formation (K) have been helpful for growth and increase of per capita income. The effect of industrialization is insignificant. It may be due to moderate industrial growth in most of the states of the country or because of the fact that capital expenditure and capital formation have subsumed the effect of industrial growth.

Table 2. Panel Regression of Log of per Capita Net State Domestic Product ($ln_pc_nsdp_cnsdp$) on Log of Capital Expenditure (ln_cap_exp) and Log of Revenue Expenditure (ln_rev_exp) Along with Other Explanatory Variables
Dependent Variable: $ln_pc_nsdp_cnsdp$

Explanatory variables	(1)			(2)		
	Coeff.	t	P > t	Coeff.	Z	P > Z
ln_gcf_cnsdp	0.27	4.96*	0.000	0.18	3.41*	0.001
ln_cap_exp	0.45	8.56*	0.000			
ln_rev_exp				0.43	7.02*	0.000
ind_nsdp	-0.38	-0.28	0.778	0.52	0.42	0.674
constant	3.28	5.81*	0.000	3.42	5.90*	0.000
	R ² : within = 0.79 between = 0.07 overall = 0.38 FEM [#] , F (3, 48) = 63.84 Prob > F = 0.000 n = 68, Group = 17			R ² : within = 0.78 between = 0.12 overall = 0.42 REM ^{##} wald chi2 = 127.22 Prob > chi2 = 0.000 n = 68, Group = 17		

* significant at 1% level.

Hausman test accepts fixed-effects model.

Hausman test accepts random-effects model.

Source: Estimation of the authors from RBI data.

The equation (2) in Table 2 gives the estimates of elasticity of state per capita income w.r.t. gcf_cnsdp and revenue expenditure of the government (rev_exp). The estimates are 0.18 and 0.43 respectively. The coefficients of ln_gcf_cnsdp and ln_rev_exp are positive and statistically significant. That means, revenue expenditure and gross capital formation both have significant positive impact on per capita income in the states. In equation (2) also, the degree of industrialization has been found to be insignificant. The same reason as mentioned above may be applicable here for this result. The point to be noted here is that both capital

expenditure (G_1) and revenue expenditure (G_2) of the government have significant positive effect on per capita income (an indicator of growth) but G_1 has little stronger effect on growth than G_2 . The effect of gross capital formation (K) is significant and positive. Since growth has significant negative impact on poverty, allocation of greater share of funds to capital expenditure may be more effective in reducing poverty via its effect on growth.

The debt burden of a state has resource constraints to allocate funds for development. So, the ratio of state gross fiscal deficit to net state domestic product (sgfd_nsd_ratio) has been used to explain capital expenditure in Table 3. The results of panel regression show that debt burden has negative effect on capital expenditure. It implies that if the state is more indebted, less fund will be available for development purposes after meeting the obligation of debt-servicing.

Table 3. Panel Regression of Log of Capital Expenditure (\ln_cap_exp) on the Ratio of State Gross Fiscal Deficit to Net State Domestic Product (sgfd_nsd_ratio). #
Dependent Variable: \ln_cap_exp

Explanatory variable	coeff.	Z	$P > Z $
sgfd_nsd_ratio	-0.123	-2.29*	0.022
ind_nsdp	1.386	0.62	0.533
constant	8.505	13.46*	0.000
R^2 : within = 0.10 between = 0.03 overall = 0.07 # wald chi2(3) = 5.71 prob > chi2 = 0.057			

* significant at 1% level.

Hausman test accepts random-effects model

Source: Estimation of the authors from RBI data.

In Table 4 panel regression of poverty on state per capita income (pc_nsdpcnsp), share of pub expenditure on infrastructure (pub_exp_infr), social expenditure of the government (ln_social_exp) and share of services in net state domestic product (service_nsdpcnsp) along with controls in three separate equations. This regression examines how important growth is in reducing poverty. The result shows that the coefficient of $\ln_pc_nsdp_cnsdp$ is negative and highly significant. That means, increase in per capita income significantly reduces poverty. It establishes that growth is very important for reduction of poverty. The share of agriculture in net state domestic product (agri_nsdpcnsp) is found to have positive effect on poverty. It can be explained by the fact that greater dependence on agriculture means economic backwardness. Naturally, poverty will be higher in that state. The Indian economy is experiencing high rate of growth largely banking on service sector. So, both agriculture and industry are found to be less important in growth and reduction of poverty.

The public expenditure can be further classified as expenditure on infrastructure and social development. Infrastructure like roads and highways, railways, sea and air ports, electricity, irrigation projects significantly accelerates growth and investment. So, the public expenditure on infrastructure which accelerates growth is highly significant in reducing poverty in equation (2) of Table 4. The public

expenditure on social sector such as health, education and social welfare enhances social development and increases efficiency of labour. In equation (2) of Table 4, social expenditure is found to have significant negative effect on poverty. The public expenditure both on infrastructure and social sector development has significant negative impact on poverty. But the coefficient of infrastructure is much higher than social expenditure. This suggests that greater allocation of resources to the development of infrastructure will be more effective in reducing poverty because its effect on growth is higher compared to social expenditure. The policy implication is very clear. If the government spends more on infrastructure, per capita income will increase significantly and as a result, poverty will decline. As before, industrialisation is found to have no effect on poverty. Since industrial growth in India is very moderate and employment of labour in the industrial sector, especially in the formal organized sector, is very limited, it could not play important role in growth and poverty alleviation in the country. But social expenditure has significant negative effect on poverty.

Table 4. Panel Regression of Poverty (*pov_hcr*) on Log of per Capita Net State Domestic Product (*ln_pc_nsdpcnsp*), Log of Social Expenditure (*ln_social_exp*), Share of Services in Net State Domestic Product (*service_nsdpcnsp*) Along with Other Explanatory Variables. Dependent Variable: *pov_hcr*

Explanatory variables	(1)			(2)			(3)		
	Coeff.	Z	P > Z	Coeff.	t	P > t	Coeff.	Z	P > Z
<i>ln_pc_nsdpcnsp</i>	-13.34	-11.27*	0.000						
<i>agri_nsdpcnsp</i>	17.77	1.65**	0.098						
<i>pop_den_sqm</i>	0.003	0.49	0.623				0.029	4.45*	0.000
<i>pub_exp_infr</i>				-29.91	-2.66*	0.011			
<i>ln_social_exp</i>				-8.88	-9.85*	0.000			
<i>ind_nsdpcnsp</i>				30.26	1.48	0.145			
<i>service_nsdpcnsp</i>							-91.24	-8.75*	0.000
<i>agri_prd_hc</i>							-0.013	-7.06*	0.000
<i>constant</i>	151.88	11.10*	0.000	106.17	14.90*	0.000	95.08	16.24*	0.000
	R ² : within = 0.84 between = 0.43 overall = 0.63 REM# wald chi2(3) = 287.00 Prob > chi2 = 0.000 n = 68, Group = 17			R ² : within = 0.82 between = 0.09 overall = 0.13 FEM## F(3, 48) = 76.24 Prob > F = 0.000 n = 68, Group = 17			R ² : within = 0.69 between = 0.66 overall = 0.67 REM# wald chi2(3) = 142.53 Prob > chi2 = 0.000 n = 68, Group = 17		

* significant at 1% level.

** significant at 5% level.

Hausman test accepts random-effects model

Hausman test accepts fixed-effects model

Source: Estimation of the authors from RBI data.

Another striking result is that the share of services in nsdp (*services_nsdpcnsp*) has highly significant negative effect on poverty. This is consistent with the fact that India has achieved remarkable GDP growth largely banking on service sector growth. While the share of agriculture in GDP is sharply declining and industrial growth is moderate, the growth of the service sector is very high (more than 60% of GDP) and it has been highly effective in promoting growth and reducing poverty. Another revealing result is that productivity in agriculture (*agri_prod_hc*) has significant negative effect on poverty. This is explained by the fact that

although the share of agriculture in GDP has declined to 15% nearly half of the labour force of the country are employed in agriculture. This is a serious problem of the country. Now, if the productivity in agriculture rises, the income of the rural population increases and this leads to decline in poverty.

The coefficient of the density of population per square kilometer is positive and statistically significant. That means, if population density is high, poverty will be high. It can be explained by the fact that if the population density is high, per head availability of land for cultivation is low. So, the farmers are poor. Besides, the shortage of land in some states has become a serious constraint to industrialization. Naturally, both agriculture and industry suffer in such states. Now, if service sector does not develop that way, and the population are largely dependent on agriculture, poverty will be higher.

The effect of social expenditure of the government on the reduction of poverty is very significant although public expenditure on infrastructure has greater negative impact on poverty. The same is true for capital expenditure. So, the empirical findings suggest the policy that major thrust should be on economic growth without undermining the direct welfare schemes of the government. At the same time the governance and delivery mechanism of direct benefits should be improved so that benefits of welfare schemes reach to the target groups.

So far as allocation of funds for social sector development is concerned, interesting results have been obtained from Table 5. Here, in panel regression of Table 5 the burden of public debt (*sgfd_nsd_ratio*), *agri_nsd_ratio* and share of revenue expenditure in total spending of the government (*ratio_re*) have significant negative effect on social expenditure. Although the social expenditure is effective in reducing poverty, the state will not be able to allocate adequate funds for social development if debt burden of the state is high or the state is largely dependent on agriculture or the share of revenue expenditure in total spending of the government is high. So, side by side with optimum allocation of funds, the availability of funds is also very important from the viewpoints of growth and welfare.

Table 5. Panel Regression of Log of Social Expenditure (*ln_social_exp*) on the Ratio of State Gross Fiscal Deficit to Net State Domestic Product (*sgfd_nsd_ratio*) and Other Variables. # Dependent variable: *ln_social_exp*

Explanatory variable	coeff.	t	P > t
<i>sgfd_nsd_ratio</i>	- 4.97	- 1.80**	0.079
<i>agri_nsd_ratio</i>	- 10.31	- 10.88*	0.000
<i>ratio_re</i>	- 2.28	- 1.91**	0.063
constant	13.72	13.03*	0.000
R^2 : within = 0.79 between = 0.11 overall = 0.44 FEM, F (3, 48) = 61.64 Prob > F = 0.000 n = 68, Group = 17			

* significant at 1% level.

** significant at 5% level.

Hausman test accepts fixed-effects model

Source: Estimated by authors from RBI data.

In order to supplement the result of the effect of economic growth on poverty ratio discussed above, an attempt has been made in Table 6 to examine the effect of per capita income and literacy on average monthly per capita consumption expenditure of the rural households in the Indian states (*ampce_rural*). In the panel regression of Table 6, it is found that per capita income has significant positive impact on per capita consumption expenditure. Similarly, literacy rate has also significant positive effect on *ampce_rural*. Both *pc_nsdp_cnsp* and *literacy_rate* are indicators of economic growth and both have favourable effects on consumption expenditure of the rural households. Therefore, the hypothesis that ‘growth reduces poverty’ is reinforced by these results.

Table 6. Panel Regression of Average Monthly per Capita Consumption Expenditure of the Rural Households (*ampce_rural*) on per Capita Net State Domestic Product (*pc_nsdp_cnsp*) and Literacy Rate # Dependent Variable: *ampce_rural*

Explanatory variable	coeff.	t	P > t
<i>pc_nsdp_cnsp</i>	0.026	13.17 *	0.000
<i>literacyrate</i>	14.589	4.11 *	0.000
constant	- 671.13	- 3.23 *	0.003
R^2 : within = 0.93 between = 0.49 overall = 0.81 FEM, F (2, 32) = 245.00 Prob > F = 0.000 n = 51, Group = 17			

* significant at 1% level.

Hausman test accepts fixed-effects model

Source: Estimation of the authors from NSSO data on household consumption expenditure.

Discussion

The empirical results show that poverty has significantly declined in the states of India over the period from 1993-94 and 2011-12. Both economic growth and direct welfare measures have largely contributed to this reduction of poverty in the country. So far as the effect of public expenditure on growth and the impact of growth on poverty are concerned, it follows from this study that capital expenditure and infrastructure have significant impact on per capita income and growth and the increase in per capita income has been highly effective in reducing poverty. The social expenditure is also found to have promoted growth and reduced poverty. As a policy measure it suggests that major focus should be on growth to reduce poverty and the strategy of growth should be combined with suitable distributive and welfare measures. Many new welfare schemes have been introduced in the country in the recent time in addition to the existing ones. These welfare schemes are related to food security, employment generation, direct transfers to farmers and women, facilities of health, rural housing for the poor, and direct financial helps to the students, especially girl children. These welfare programmes are being pursued by both central and state governments. All these schemes are likely to have

favourable impact on the goal of reduction of poverty and well-being of the poor. But the effects of these schemes could not be evaluated due to lack of data. The success of welfare measures also depends on effective delivery mechanism, proper implementation of the schemes and good governance. Besides, there are many socio-economic factors and constraints due to which the poor people can not avail or utilize the benefits of government programmes. These problems are also to be taken care of while designing policy for reduction of poverty.

Conclusions

Poverty is one of the major problems in the developing countries. In India also poverty was very high in 1950s and 1960s. It has come down to 21.9 per cent in 2011-12 at the national level although poverty ratio varies from 9% to more than 30% across states of the country. The main two approaches to poverty alleviation are: economic growth and direct welfare benefits to the poor. There is a debate on which policy the government should emphasize on to reduce poverty. Both growth and direct welfare measures are related to public expenditure. This paper examines the impact of public expenditure on economic growth and poverty alleviation and also examines the effect of growth on poverty. Various studies on poverty suggest that growth is very important for reduction of poverty but growth alone is not sufficient to reduce poverty. So, the strategy of growth needs to be supplemented by distributive and welfare measures. Specially, the distribution of income and the schemes of social welfare for the poor are very crucial for poverty alleviation. The public policy and expenditure pattern of the government should be designed in such a way that growth is promoted and the benefits of growth trickle down to the poor. This paper has addressed the issues of public expenditure, growth and poverty with the help of a theoretical model and using results of panel regressions based on state level data in the Indian context. The results of econometric analysis show that both capital expenditure and revenue expenditure have significant positive impact on per capita income and per capita income has significant negative impact on poverty. These results are consistent with the theoretical findings. The capital expenditure has greater impact on growth compared to revenue expenditure. Thus both types of public expenditures are effective in reducing poverty via their impact on growth although the effect of capital expenditure is stronger. There are other classifications of public expenditure: expenditure on infrastructure and expenditure on social development. The study finds that the expenditure on infrastructure has stronger effect on the reduction of poverty compared to social expenditure. This is because infrastructure plays an important role in growth. The formation of private capital is also found to have significant effect on growth and reduction of poverty. Literacy, an indicator of economic development and social expenditure have negative effect on poverty. Thus both economic growth and social sector development are helpful in reducing poverty although the effect of economic growth is stronger. This study also finds that the growth of the service sector has significant negative impact on poverty. In the states where the share of agriculture in state GDP is high, productivity in

agriculture is low and debt burden is high, poverty is high. It indicates that if the burden of public debt is high, the government cannot allocate sufficient fund for development and social welfare. Similarly, the greater dependence on agriculture is an indicator of economic backwardness. In such states, poverty will be higher. So, this paper concludes that welfare and distributive measures must be there. But the main focus of public policy should be on growth. So, public policy and public expenditure should be decided accordingly. The limitation of this study is that the effects of distributive benefits of welfare measures like direct payment to the farmers, subsidised food to the large section of the population, welfare schemes for rural housing, health provisions and financial benefits to the students, especially the girl children, introduced in the recent time at the centre and in the states could not be evaluated properly due to lack of data. There is scope for further studies on the effects of such welfare programmes on poverty.

References

- Adjasi CKD, Osei KA (2007) Poverty profile and correlates of poverty in Ghana. *International Journal of Social Economics* 34(7): 449–471.
- Afonso A, Furceri D (2010) Government size, composition, volatility and economic growth. *European Journal of Political Economy* 26(4): 517–532.
- Agenor PR (2008) Fiscal policy and endogenous growth with public infrastructure. *Oxford Economic Papers* 60(1): 57–87.
- Ahluwalia MS (1976) Inequality, Poverty and Development. *Journal of Development Economics* 3(4): 307–342.
- Ahluwalia MS (2011) Prospects and Policy Changes in Twelfth Plan. *Economic and Political Weekly* 46(21): 88–105.
- Ahmad M (2014) Government expenditure and economic growth: An econometric test for India. *International Journal of Social Science Humanities Research* 2(3): 79–88.
- Alesina A, Rodrick D (1994) Redistributive Politics and Economic Growth. *Quarterly Journal of Economics* 109(2): 465–490.
- Ames B, Brown W, Devarajan S, Izquierdo (2001) *Macro Economic Policy and Poverty Reduction*. IMF and World Bank.
- Anand S, Kanbur SMR (1993) The Kuznets Process and inequality-development relationship. *Journal of Development Economics* 40(1): 25–52.
- Aschauer D (1989) Is government spending productive? *Journal of Monetary Economics* 23: 177–200.
- Banerjee AV, Newman AF (1993) Occupational Choice and the Process of Development. *Journal of Political Economy* 101(2): 274–298.
- Barro RJ (1990) Government spending in a Simple Model of Endogenous Growth. *Journal of Political Economy* 98(5): 103–125.
- Barro RJ (1991) Economic Growth in a cross section of countries. *Quarterly Journal of Economics* 106(2): 407–444.
- Bhagwati JN (1988) Poverty and Public Policy. *World Development* 16(5): 539–654.
- Bruce N, Turnovsky SJ (1999) Budget Balance, Welfare and the Growth Rate : “Dynamic Scoring” of the Long-Run Government Budget. *Journal of Money, Credit and Banking* 31(2): 162–186.
- Chen BL (2006) Economic growth with an optimal public spending composition. *Oxford Economic Papers* 58(1): 123–136.

- Chen S, Ravallion M (2000) *How did the world's poorest face in the 1990's*. Policy Research Working Paper No. 2409, World Bank.
- Chiang AC (1992) *Elements of Dynamic Optimisation*. New York: McGraw-Hill Ins.
- Collier P (1998) *Social Capital and Poverty*. Working Paper No. 4. Washington DC: The World Bank, Social Development Family, Environmentally and Socially Sustainable Development Network.
- Devarajan S, Swaroop V, Zou H (1996) The composition of public expenditure and economic growth. *Journal of Monetary Economics* 37(2): 313–344.
- Galor O, Zeira J (1993) Income Distribution and Macroeconomics. *Review of Economic Studies* 60(1): 35–52.
- Gangal VLN, Gupta H (2013) Public expenditure and economic growth: A case study of India. *Global Journal of Management and Business Studies* 3(2): 191–196.
- Government of India (2013) *Press Note on Poverty Estimates 2011-12*. Planning Commission.
- Leeper EM, Walker TB, Yang SCS (2010) Government investment and fiscal stimulus. *Journal of Monetary Economics* 57(8): 1000–1012.
- Lucas RE (1988) On the mechanism of economic development. *Journal of Monetary Economics* 22: 3–42.
- Lustig N (2002) *Poverty Reduction and Economic Growth: A two-way causality*. Washington DC: Inter-American Development Bank, Sustainable Development Department, Technical Paper Series, and UNU, WIDER.
- Mahapatra G, Giri AK (2016) The composition of public expenditure and economic growth in India: Evidence from auto regressive distributed lag approach. *Journal of Economic Research* 21: 205–230.
- Marjit S, Sasmal R, Sasmal J (2020) Composition of public expenditure and growth of per capita income in Indian states: a political perspective. *Journal of Social and Economic Development* 21(Apr): 1–17.
- Mauro P (1995) Corruption and Growth. *Quarterly Journal of Economics* 110(3): 681–712.
- Meltzer AH, Richard SF (1981) A Rational Theory of the Size of the Government. *Journal of Political Economy* 89(51): 914–927.
- Mulok D, Kogid M, Asid R, Lily J (2012) Is economic growth sufficient for poverty alleviation? *Cuaderanos de Economia* 35(97): 26–32.
- Owino B (2017) Public Expenditure in the social sector and economic growth in Kenya. *Journal of Economics and Sustainable Development* 8(14).
- Persson T, Tabellini G (1994) Is Inequality Harmful for Growth? *American Economic Review* 84(3): 600–621.
- Ravallion M, Chen S (1997) What can New Survey Data tell us about recent changes in distribution and poverty. *The World Bank Economic Review* 11(2): 357–382.
- Reserve Bank of India. *Handbook of Statistics on State Government Finances* (several issues).
- Reserve Bank of India. *State Finances – A Study of Budgets* (several issues).
- Reserve Bank of India (2022) *Handbook of Statistics on Indian Economy*. 2009-10.
- Reserve Bank of India (2022) *Handbook of Statistics on Indian States*.
- Reserve Bank of India. *Handbook of Statistics on State Government Finances* (several issues).
- Sasmal R, Sasmal J (2016) Public expenditure, economic growth and poverty alleviation. *International Journal of Social Economics* 43(6): 604–618.
- Sasmal J, Sasmal R (2023) Public expenditure, human capital formation and economic growth in a modified Lucas framework. *Journal of Quantitative Economics* 21(4): 745–768.

- Sen A (1981) *Poverty and Famine: An Essay on Entitlement and Deprivation*. Oxford.
- Shafuda CPP, De UK (2020) Government Expenditure, Human Capital and Growth in Namibia: a time series analysis. *Journal of Economic Structures* 9(21).
- Son HH, Kakwani N (2004) *Economic Growth and Poverty Reduction: Initial conditions matter*. International Poverty Centre, UNDP, Working Paper No. 2.
- Wooldridge JM (2009) *Econometrics*. Mason: Cengage Learning.
- Zhang L (2015) A multi-sector model of public expenditure and growth. *Journal of Economics* 115(1): 73–93.

How Digital Transformation Impacts Customer Experience in the Hard Luxury Industry: Consensus on Omnichannel Strategy

By Marine Bertrand[±] & Ekaterina Glebova^{*}

Despite the impact of digitalization in the luxury industry since the health crisis, few researches have been done on the hard luxury industry. Therefore, the aim of this study is to provide insight on how digitalization has been transforming the customer experience in this niche market. The study delivered additional insights to the existing literature, especially on the change in the digital strategy of hard luxury brands which tend to focus on an omnichannel approach. Through the analysis of interview data and a qualitative survey with some Kering experts on client service, the study deepens the new vision of digital customer experience and their perception of the client-centric approach in the luxury industry. The qualitative research highlights concrete actions that can be done by hard luxury brands in order to enhance the customer experience. Despite the challenges these brands face in preserving the values of this industry, such as craftsmanship and scarcity, the digital transformation has its share of opportunities. The results show a tendency to opt for omnichannel strategy, and the use and optimization of data and digital innovations to leverage the customer experience. In this study, a gap in the literature is addressed by focusing on the hard luxury segment and how digitalization has been transforming it.

Keywords: hard luxury, digitalization, digital transformation, data, omnichannel, customer experience

Introduction

In November 2022, the renowned Italian jewelry Maison Bulgari took part on the largest metaverse platform Zepeto by creating a virtual pop-up store inspired by its store located in Jeju, South Korea. The users of Zepeto can dress their avatars with Bulgari high-end jewels and allow them to live an exclusive online experience. A few years ago, luxury brands could never have conceived such an experience.

Traditionally, the luxury industry is known as tech-laggards. But this reluctance to be part of the digital journey can be explained by a fundamental dichotomy in their core values. Firstly, **luxury goods** are defined as objects of desire that provide a certain pleasure rather than meeting basic needs (Pietrzak 2019). Besides, they are defined by their scarcity as the limited availability of luxury items drives up their prestige, while digital technologies are characterized by their widespread availability.

[±]Rennes School of Business, France.

^{*}Researcher, Université Paris Saclay, CIAMS, France.

Secondly, luxury items are steeped in the notion of heritage and craftsmanship, whereas **digitalization** is challenging the timelessness of these products. Digitalization or digital transformation is usually defined as the use of digital technologies such as social media, analytics, mobile devices to elevate businesses (Kraus et al. 2021).

Thirdly, luxury clients care about data security but digitalization introduces concerns regarding data. Overall, bridging the gap between these two oppositions is a difficult balance to strike.

However, the COVID-19 was the catalyst of this transformation. Indeed, the health crisis accelerated the adoption of digital strategies while stores were being closed. In order to keep selling their items, luxury brands, including hard luxury ones, had to reevaluate their distribution channels and overall their business model. Plus, digital innovations such as social media, artificial intelligence, and websites, are perceived as an opportunity for such brands in order to share their heritage and culture to digital consumers.

Therefore, the luxury industry has started to integrate digitalization to its long-term strategy in order to enhance customer experience. The **customer experience** is defined by the overall interactions with the brand all along the customer journey, from initial awareness to post-purchase phase and it is crucial in the luxury industry as it helps to build brand loyalty and it is a way to differentiate from competition. However, the customer experience in the luxury industry is taken to the ultimate level. Compared to the mass market, luxury brands differentiate themselves through premium prices, craftsmanship and exquisite and personalized experience. But, nowadays, the customer experience is no longer about focusing on third-party retailers but rather about a seamless omnichannel experience.

While luxury fashion brands, like Balenciaga, are trying to catch up with the digitalization of the customer journey, it is more difficult for hard luxury brands like Cartier, Bulgari or Boucheron to do the same. In fact, **hard luxury** represents high-end watches and jewels whose price exceeds thousands of euros. Clients in this segment have even higher expectations compared to fashion as they buy the most exquisite and elaborate products in the world.

Digitalization allows clients to live an in-store experience while staying at home thanks to augmented reality and platforms that client service uses to create a similar and qualitative experience but online. Yet, for the luxury brands, this digital transformation brings new and disruptive processes to the forefront. They have to conciliate with the shift into WEB 3.0 and focus on a customer-centric vision to fulfill clients' expectations.

Besides, even hard luxury brands use a range of metrics, such as Net Promoter Score or the end chat survey, that allow them to collect data on their clients in order to customize their experience and provide them with the best assistance.

However, this change of business model is not without its hurdles. These brands face challenges at various levels (process, deployment, omnichannelity, etc.) and sometimes struggle to catch up.

Digital transformation impacted every industry. Because of the gap in the literature review on the hard luxury industry, it is relevant to focus on this domain. Therefore, it is essential to understand what impacts this phenomenon holds on

this industry and how hard luxury brands face them, through a multi-disciplinary approach. The issue at the heart of this work is **how digitalization impacts the customer experience in the hard luxury industry?** In order to identify and understand the several factors driving this transformation, it is important to highlight the challenges and opportunities of it. Also, it is crucial to understand how data plays a key role in this transformation.

This study focused on gathering insights into the challenges and opportunities faced by hard luxury brands, arising from digital transformation. It also emphasized actions and concrete levers that enable hard luxury brands to enhance the customer experience.

A literature review and a qualitative research will be used to obtain in-depth insights of experts and managers working on a daily-basis on this digital transformation and in the hard luxury industry.

Consequently, the study is divided into several parts. After this introduction, there is a literature review that presents the theoretical background of the research. In this theoretical part, the context of the digital transformation of the whole luxury industry and its impacts will be explained. Then, the practical part, also called methodology, will complete the findings of the theoretical part. This part is based on qualitative studies and is divided into 2. On one hand, one will focus on the analysis of interview results and on the other hand on survey results. Finally, the conclusion will give an answer to the issue explained previously, and some recommendations and limits will follow from it.

Literature Review and Theoretical Background

Key Factors of the Digitalization of the Luxury Industry

The covid-19 crisis has been the triggering event for the digitalization of the luxury industry. Before this event, luxury brands were skeptical about changing their distribution channel based on retailers. For instance, the luxury watchmaker Patek Philippe allowed its retailers to sell Philippe Patek watches online for the first time. These brands suffered from retail closures and they were reluctant to change their strategy for several reasons. On one hand, they wanted to keep full control on their identity based on scarcity and craftsmanship. On the other hand, there was a real lack of capability to sell online so it required a huge change and investment (Faccioli and Sheehan 2021).

Besides, from a client's point of view, when they invest in a luxury item, they are not only acquiring a product, but also an experience, a piece of art that elevates their social status. A luxury branding strategy, defined as a strategy to establish a clear and distinctive identity of a product or service, hinges on rendering the acquisition process deliberately difficult, which can result in limited production, long waiting in the delivery (waiting list), etc. But this strategy doesn't match the global digital strategy that involves easy and worldwide accessibility (Romo et al. 2017).

A Change in Business Model

Digital transformation has implied a change in business model, defined as the way an organization or network collaborates at the strategic and operational levels to provide and leverage products and services (Bouwman et al. 2019). Today, hard luxury brands are making the transition from brick and mortar business model that relies on selling in physical stores, to a more digitally-oriented one. In order to survive the COVID-19, a business model innovation was crucial to seize opportunities and enhance the value proposition (Dai et al. 2022).

Nowadays, luxury brands, even hard luxury brands, operate through the e-commerce channel and it is expected that online sales of luxury watches will reach \$6 billion by 2025 (Amed et al. 2021). If we dig into the high-end watch industry, the share of high-end watches purchased through digital channels will increase to 30% by 2030 (Szegedi et al. 2022). Indeed, hard luxury brands understood that e-commerce is an exponential market and there is a real focus on it as Antonio Carriero, Chief Digital & Technology Officer at Breitling, affirmed that hard luxury brands plan to triple their online sales (Salesforce et al. 2021).

However, they are facing a real challenge as digitalization requires a change in processes, culture and vision. Luxury was used to few classical touchpoints such as traditional media, stores, department stores etc., where it was quite easy to have full control on them. Today, there is a proliferation of touchpoints, especially digital ones like social media (Instagram, WeChat...) and e-commerce websites, thus it is hard to provide clients with a high quality and smooth experience on each one (Remy et al. 2015).

Moreover, there is a difference between “passion shoppers” who are the traditional consumers of luxury goods who have a certain habit and affection for a particular Maison, and “logic shoppers” who are new to this kind of shopping experience. The last ones are more attracted to well-known and modern luxury brands. Digital transformation allows to capture these “logic shoppers”, thus, the importance of switching from a traditional brick and mortar business model to a more digitalized one (Pietrzak 2019).

However, global consumers view online transactions as riskier compared to traditional marketplaces, primarily due to uncertainties regarding the outcomes of online purchases. Customers place significant reliance on the perceived trustworthiness of the website, especially when buying products that are not physically available at the time of the transaction and when entrusting businesses with their sensitive information. Additionally, online customers are unable to physically engage with products, resulting in a sense of vulnerability regarding the use of their data by brands, which in turn leads to reservations about making online purchases (Swaminathan et al. 2018).

Combined with the challenges specific to luxury brands, they have a real interest in developing their omnichannel strategy in order to offer reassurance and a premium experience to online customers.

A Focus on Omnichannel Strategy

Apart from the health crisis, other key factors have influenced the choice to adopt an omnichannel strategy. In fact, digital natives, including millennials and the generation Z, represent a huge part of their end-customers and they demanded the presence of luxury brands in e-commerce. Then, as China became a new great opportunity for luxury brands and Chinese people consumed a lot through digital channels, they could not escape from this change. The last key factor is the possibility to build new powerful partnerships with major players in digital such as WeChat, luxury marketplaces like Farfetch, etc. (Faccioli and Sheehan 2021). All these factors have accelerated the change towards an **omnichannel strategy** which is a strategy where “clients consider all the retailer's sales and marketing channels as one entity, and the shopping experience is seamless regardless of which channels the customer uses” (Herhausen and Herrmann 2015). Two main omnichannel strategies were identified. The first one corresponds to online retailers which decided to include physical stores to their existing channels. The second strategy is adding digital channels to existing physical channels and this is the strategy followed by luxury brands. At the end, both strategies aim at mixing all the sales channels (Aiolfi and Sabbadin 2017).

However, the hard luxury industry needs to step up its game by differentiating even more the online customer journey through online brand content, the use of Artificial Intelligence via a chatbot, Augmented Reality such as virtual try-on, etc. Overall, the luxury industry is far from being mature regarding this strategy. There are “five critical services” that should be mastered to be considered as having a real omnichannel strategy, which are:

- Real time product and stock availability for both online and in-store channels;
- Home delivery and click and collect option;
- Return in store;
- Integrated loyalty;
- Real-time customer service.

However, the more premium a brand is and the harder the brand struggles to offer these 5 key services. High-jewelry brands are among these premium brands, which makes the task difficult (Barbat et al. 2018). Therefore, to develop e-commerce and digital channels is part of top 3 priorities in 2023 (Szegedi et al. 2022). For instance, Breitling has invested 70% of their media marketing budget in digital in order to catch up (Amed et al. 2021).

Omnichannel strategy is a tactical decision for hard luxury brands. The strategy is slightly different from “soft luxury” defined by clothing and leather goods. Indeed, this tactical decision for hard luxury brands relies on delivering a customized and exclusive experience and increasing the drive-to-store traffic (Barbat et al. 2018).

Regarding this omnichannel strategy, the challenge is about providing a seamless online customer experience where luxury brands have to be available

anytime, providing clients with accurate information, through an easy, personalized and engaging customer journey that clients could experience in store (Klaus and Tynan 2022).

However, they need to be careful to 7 deadly sins of a failed online luxury experience identified by IFOP (Amed et al. 2021):

- A digital experience that is too slow: clients must not encounter any obstacles. A seamless online experience is a must for luxury brands.
- A website that doesn't represent the brand DNA: clients should be inspired and should be able to easily identify the brand's characteristics.
- Lack of experience: a luxury brand website is not only about selling products but providing clients with a personalized experience.
- Lack of consideration: a balance should be found between high quality relationship, customization without being intrusive.
- Lack of creativity: a luxury brand should express itself as it does through its collections.
- A website that is not convenient: if it takes too much time to find the right information or the right product, the client will be disappointed, which is not possible for a luxury brand.
- An online product offer that is too small: clients should be able to find the same products as they could see in store. Product availability is a real stake for luxury brands.

The luxury auctioneer Maison Sotheby's can be a real inspiration for hard luxury brands. In fact, because of the health crisis it was impossible to maintain traditional and physical sales, so Maison Sotheby's decided to adopt a digital strategy by creating a digital gallery, selling via livestream videos, 360° high quality video on its website presenting luxury jewel pieces for instance. That kind of online event resulted in a \$12.3 million dollar sale of a pear-shape diamond (Briones 2022). Therefore, hard luxury brands have many opportunities to develop their omnichannel strategy, including NFTs and metaverses.

Besides, hard luxury brands can benefit from two main outcomes which are growth in sales and profits, and omnichannel loyalty. The first outcome is explained by the fact that the multiplication of touch points enables brands to reach a broader audience, especially online. Plus, the second outcome is explained by the fact that it is easier to understand online clients thanks to data. For instance, when clients log in their online account on a brand's website, it is easy to track the previous online activities, what clients are looking for thanks to the wishlist feature, how frequently they visit the website etc. Plus, they can monitor all clients' purchases through CRM (Customer Relationship Management) tools (Aiolfi and Sabbadin 2017).

Social Media and Storytelling

Regarding interesting digital channels for hard luxury brands, social media should be considered. As luxury brands have a deep story and heritage, social media

represents a major channel to enhance customer experience and develop brand loyalty. This medium allows luxury brands to connect with their audience on a more personal level through edited content such as fashion show videos and evoke certain emotions. It is also an opportunity to reveal their heritage as a part of luxury consumers barely know about a luxury brand story and purchase their product only for self-esteem and recognition. That narrative transportation results in driving a strong emotional response which has a direct impact on client loyalty. Besides, a strong presence online allows to reach a global audience that could be interested in luxury brands (Park 2020).

From Web 1.0 to Web 3.0

In 30 years, we went from Web 1.0 based on the share of content, to Web 2.0 based on collaboration through blogs and social media, and finally, Web 3.0 that could count 1 billion users by 2030 (Vitry et al. 2022). Web 3.0 relates to a new era based on decentralization, blockchain, Artificial Intelligence and immersiveness (Gilbert 2022). Within Web 3.0, metaverses could play a big part as an online universe. In fact, metaverses are virtual environments seamlessly integrated with the tangible world thanks to AI and Augmented Reality.

In fact, jewelry brands are proactive in order to amplify their online presence through the integration of augmented reality try-on and virtual appointment. Indeed, this market has always relied on offline interaction to generate sales. However, because of external factors such as digitalization and COVID-19, it has accelerated the urgency for such brands to go digital. For instance, the creation of a 3D virtual representation. This technological advancement enables the virtual testing of jewelry, even during its intangible phase. Such capabilities are made feasible through Virtual Prototyping and Augmented Reality, empowering users to engage directly with digital products as if they were physically present (Cappellieri et al. 2022).

Metaverse is the next step in the digital customer experience and it allows to reinvent e-commerce, amplify physical stores and gamify the customer experience (Vitry et al. 2022).

The other major important component of Web 3.0 is the Non-Fungible Tokens also known as NFTs which grants ownership on a unique and exclusive digital item (Gilbert 2022).

Besides, the NFTs market is estimated to be worth \$1.2 billion (Alnuaimi et al. 2022). NFTs offer two opportunities for luxury brands: strengthen their CRM (Customer Relationship Management) tool as they allow to build a community, and guarantee product authenticity. Currently, in this industry it exists three types of NFTS (Vitry et al. 2022):

- NFT generated when a client buys a tangible product
- NFT obtained through socializing with the brand such as attending an event or being part of its community

- NFT was purchased as a digital creation. For instance, in 2021, the hard luxury brand Louis Erard launched the first NFT in this industry, a limited-edition Louis Erard with Alain Silberstein (Szegedi et al. 2022).

Finally, In October 2022, Audemars Piguet and Wristcheck, a pre-owned watch trading platform, launched a crowdsourced project allowing watch- enthusiasts to send their design to co-create on a new Royal Oak watch with Audemars Piguet. This idea is disrupting the high-end watch industry as it has been a very skeptical industry regarding digital strategy (Szegedi et al. 2022).

Despite these opportunities, luxury brands have to face several challenges regarding NFTs. In fact, it is still a blurred topic and many clients are not convinced yet as they are not tangible products. It is important to build first a community ready to accept these new digital products and evolve through a test and learn method (Briones 2022).

The Importance of Data to Personalize the Customer Experience

Finally, it's not only a race for digital transformation, defined as the use of new digital technologies, such as social media, analytics, or embedded devices, to achieve significant business improvements, but a race for collecting insight thanks to data (Dai et al. 2022). Clienteling entails establishing and cultivating brand-customer connections based on their preferences, habits and behaviors. When coupled with data, it becomes a potent tool for luxury brands for updating customer information in real-time. Data empowers a luxury brand to adopt a customer-centric approach by understanding online behavior, preferences, buying patterns, and consumption habits. Furthermore, the customer journey does not end at the purchase step but it continues afterwards so Houses keep collecting data by soliciting reviews or extending personalized event invitations, which foster loyalty. Moreover, employing a CRM tool allows for strategic timing in customer outreach, enabling effective follow-up and potential sales generation. Providing supplementary information post-purchase, through emails for instance, adds substantial value and bolsters customer allegiance (Brione 2022). Data brings another dimension to luxury clienteling. Indeed, it helps to learn deeply about a client's wants and expectations which is important to build a personalized experience. For instance, brands can learn about which product was abandoned in an online basket, which size the client is used to buy, which store the client is used to book appointments, etc. In fine, the relationship becomes hyper-premium too which has an impact on customer loyalty. Indeed, 80% of luxury consumers ask for personalization. For instance, it could be to choose the watch dial color if we apply personalization to the hard luxury industry (Amed et al. 2021).

In an omnichannel approach, adept data analysis serves as the base for hyper-personalizing the luxury customer experience. Nevertheless, brands must be cautious in balancing this with appropriate storytelling to preserve their brand image and heritage. Evaluating the effectiveness of implemented strategies can be challenging, underscoring the significance of choosing the right Key Performance Indicators (KPIs). Additionally, amidst the big amount of digital data, there is a

risk of becoming overwhelmed by customer feedback. Yet, achieving a profound understanding of customers remains imperative, especially in the luxury industry.

Plus, the proliferation of touch points, especially online, results in an explosion of big data all along the customer journey. This data is collected through the customers' behavior when they browse websites, log in their account, or answer a post-purchase survey to evaluate their shopping experience. All this information is challenging Customer Relationship Management. However, new digital touch points such as social media are an opportunity (Zaki and Neely 2018). Besides, customers are aware of how data can enhance their experience as 45% of luxury customers know that collecting their personal data is key to improve their experience (Salesforce et al. 2021).

Because of external factors such as COVID-19, luxury brands were forced to switch their business model and accept to be part of the digital transformation, even though it implies several challenges. In fact, the digital transformation has raised a number of issues such as:

- How to preserve craftsmanship and the core values of luxury while creating digital touch points which are accessible by anyone?
- How to preserve a premium experience for clients?
- How is it possible to ensure a seamless omnichannel strategy to provide clients with the best experience possible?

Besides, digital is growing fast and nowadays, with the advent of Web 3.0, luxury brands, especially hard luxury ones, struggle to preserve what they used to represent.

Nevertheless, digitalization should be perceived as an opportunity for hard luxury brands. In fact, thanks to data, it is possible to provide clients with a premium experience both offline and online. Besides, hard luxury brands can offer a hyper personalized experience and improve customer loyalty. The customer experience in the luxury industry, including in the hard luxury industry, has to become seamless because clients should be able to choose different touchpoints and buy from both in store or online easily.

Besides, touchpoints like social media allow the luxury brands to communicate and share their unique storytelling while targeting a wide audience. Plus, thanks to AI, clients can live an exquisite experience through high-quality videos without leaving their house and feel attached to the brand.

In other words, this literature review allows us to understand the context of the digital transformation and how it affects the hard luxury industry. Indeed, the main challenges and opportunities were identified. Nevertheless, the current literature focuses mainly on fashion luxury. The hard luxury is niche and the experience is slightly different from the fashion one which requires a specific analysis.

Methodology

Research Method

As previously stated, the luxury industry, particularly the hard luxury industry, has undergone a radical transformation. Houses have to integrate digitalization into their traditional business models based on brick and mortar retailing. However, these changes result in new challenges and opportunities. This research delves into the projects, features and strategies that are implemented to address these new challenges in order to enhance the digital customer experience.

The convergence of physical and digital realms has prompted hard luxury brands to reevaluate their strategies, fulfilling new customer expectations of a digitally empowered consumer base while maintaining the essence of exclusivity and craftsmanship that defines the industry. To fill the gap with current studies and the lack of insights on how hard luxury brands are addressing the challenges and leveraging the opportunities posed by digitalization, a methodological approach rooted in qualitative inquiry was adopted.

Qualitative research offers concrete and in-depth responses on what can be done in the hard luxury industry to enhance the digital customer experience and at the same time protect the core values of the industry. This study is based on a mixed-methods design, incorporating 3 face-to-face interviews and an open-ended survey as primary data collection tools.

By utilizing face-to-face interviews (N=3), this research aimed to engage directly with key stakeholders within luxury brands, including Sarah Halily, Product Owner of Powerfront and NPS at Kering, Veronica Poli, e-commerce project coordinator at Pomellato and DoDo, and Claire Nicolas, e-business project manager at Boucheron. These interviews provided a better and comprehensive understanding of the strategies and adaptations undertaken to enhance customer experience.

Complementing the interview part, an open-ended survey was deployed to 5 stakeholders of the luxury client service, enabling a more expansive exploration of consumer perceptions and experiences. The open-question format of the survey facilitated the collection of rich qualitative data, enabling respondents to express freely their thoughts on the topic.

By combining the findings from both the face-to-face interviews and the open-ended survey, this research endeavors to ensure that the voices of hard luxury brand representatives and consumers alike are given ample space, to give a comprehensive understanding of the diverse strategies, challenges, and solutions in addressing the evolving customer experience.

The research findings will be presented and analyzed, shedding light on the insights gleaned from this qualitative study to provide hard luxury brands with potential paths to find equilibrium between tradition and innovation in an increasingly digital world.

Data Collection

Sample: The Choice of Respondents

Regarding the choice of respondents of the face to face interviews, it was important to talk to people who are experts on the digital field in the luxury industry, but also on the luxury client service field. In order to gather different points of views, I chose 3 people working for different Houses.

The first respondent was Sarah Halily, a Product Owner working on a corporate level for the French luxury group Kering. She is a young woman who did a Business School and specialized in innovation. She started to work for a mass retailing brand and learnt a lot about the use of data, e-commerce projects and how to facilitate the brand entry's into a new market through digital innovation. With her mass market background, it was very interesting to compare the digital initiatives and transformation between mass market and luxury industries.

The second respondent was Veronica Polli, an E-commerce Project Coordinator at Pomellato and DoDo, two premium jewelry brands which belong to Kering. She is working on front-end projects on a daily basis. As there is a lack of insights on the hard luxury industry, it was important to collect data from a person who works on the digital transformation of hard luxury brands.

Finally, the last respondent was Claire Nicolas, an E-commerce project Manager at Boucheron, a high-end jewelry Maison which belongs to Kering too. She is working on front-end projects as well, with the missions of conveying the brand's DNA and ensuring an optimal customer experience on the website.

Interview Guidelines

On one side there are face to face and in-depth interviews of expert digital project management such as Sarah Halily, Product Owner of Powerfront and NPS at Kering, Veronica Poli, e-commerce project coordinator at Pomellato and DoDo, and Claire Nicolas, e-business project manager at Boucheron. These three interviews follow a semi-structured interview approach in order to guide the experts but also provide them with enough freedom to answer open questions (appendix 1, 2, 3). Overall, the questions were similar and were as follows:

- When did you notice an acceleration of the digital movement in the luxury industry?
- What are the main challenges? What are the main opportunities?
- What strategy does the brand/group follow in order to enhance the online customer experience?
- Do you follow a test and learn/agile approach? Why or why not?
- How do you measure the success or failure of your digital initiatives to enhance the digital customer experience?
- What trend did you identify regarding the online customer behavior?
- In your opinion, do the hard luxury consumer expectations are higher than in the fashion industry?
- What is your opinion on metaverse to enhance the online customer experience in the hard luxury industry?

The Survey

The Choice of Respondents

In terms of selecting survey participants, it was crucial to have complementary data to the face-to-face interviews. Therefore, the five participants' profiles are more diverse, including E-commerce Client Service Project Manager, Salesforce Service Cloud and Data Privacy Manager, Product Manager Aftersales, Global Trainer Lead, and Privacy Data Subject Requests Lead. These individuals all work at the Kering group either on a corporate level or Client Service Hub Level (Kering Signature).

The Survey Guide

The six following questions have been sent to 5 experts in client service in a luxury environment (Appendix 4 and 5):

1. In your opinion, what is the main impact of digitalization on the luxury customer experience?
2. How a luxury group, as Kering, is working to enhance the online customer experience?
3. What are the main pain points concerning the omnichannel strategy in the luxury industry?
4. Regarding high-end jewelry, what is the main challenge that comes with digitalization?
5. What major benefit can digitalization provide the hard luxury segment with?
6. What is your opinion on the use of metaverse and blockchain in the luxury industry?

Results

Results of the Face to Face Interviews

By analyzing the primary data, through a thematic approach, several categories emerged from these three interviews. As we can see on the following figures, several words were used by the three respondents while emphasizing the themes that will be presented shortly.

Digital transformation as an opportunity:

All interviewees agreed that covid-19 has been the trigger for accelerating digitalization. As outlined in the literature review, the closure of physical boutiques resulted in a shift in business models, with a clear integration of digital channels.

Besides, participants emphasized the importance of transcribing the unique identity of the luxury house from physical stores to the online platform. This involves a meticulous translation of brand elements, including decor, atmosphere, and overall experience, into the digital realm. In doing so, digitalization offers many opportunities to enhance the customer experience.

Firstly, there is one advantage of being tech laggards. In fact, as Sarah Halily said, hard luxury brands have the occasion to analyze what has already been done.

Now, they can choose and test what is best for their website and the customer experience.

Claire Nicolas identified another opportunity thanks to digital transformation which is accessibility. Concerning Boucheron, there are not a lot of stores in France and abroad which can be frustrating from a client's point of view. Having an e-commerce website allows clients to buy from their home without traveling to the boutique located Place Vendôme for instance. Plus, many clients are scared to enter into a boutique because it is quite impressive. Shopping online allows these clients to make them feel at ease when they look at the products and make the purchase, while benefiting from assistance thanks to customer service and live chat. Online assistance is crucial as it is part of a great customer experience. Moreover, Claire Nicolas emphasized on “the tone of voice” which is a part of clienteling. It reflects the sophistication, the expertise and the premium experience. Through emails, social media, or the live chat on the e-commerce website, the tone of voice needs to perfectly represent the reality, as there is no Sales Associate next to the client to assist them, and be consistent through all the channels.

Interviewees highlighted the unique challenges faced by luxury brands in preserving the exclusivity and sophistication associated with their products in the digital space. For instance, Claire Nicolas explained that Boucheron has taken the code of its famous boutique located Place Vendôme in Paris, such as the green marble, and redesigned the website so that customers can directly identify the brand's DNA. It helps give the client the confidence to go ahead with the purchase. Being able to represent the atmosphere of iconic boutiques reassures and confirms customers' choice. Indeed, online, it's very easy for a customer to switch from one brand to another. This refers to the “logic shoppers”, mentioned in the literature review by Pietrzak (2019), who are clients who are mostly looking for well-known brands but they don't have a habit of buying from a specific one. For instance, it does not matter for these shoppers who are looking for a premium necklace if it is a necklace from Van Cleef and Arpels or from Cartier.

Overall, the transition requires careful consideration of design elements, user experience, and content presentation to maintain brand integrity. Nevertheless, the change is “mandatory” according to Veronica Polli.

In order to improve the customer experience, some indicators are useful. Sarah Halily worked on the NPS (Net Promoter Score) projects for several brands. She explained it is a great clienteling tool as it allows clients to assess the experience and loyalty whether in store or online. The NPS is a metric that consists in sending the following question to clients after their experience: “on a scale of 0 to 10, how likely are you to recommend the brand to your friends and family?” Depending on the number, clients are categorized as promoters (9-10), passives (7-8) or detractors (below 6). Plus, clients can add their feedback. Therefore, if the NPS is quite low and many feedbacks explain that clients are not able to proceed to payment easily it allows brands to work on it and improve the customer experience. However, Sarah explained that this metric should be completed with others such as the Customer Effort Score (CES) which can be described with the following question: “how easy was it for you to...?”

Such efforts are crucial for ensuring that the online experience resonates with the brand's established identity. This part of the results completes the literature review by providing concrete actions to master digital transformation and enhance the customer experience in the hard luxury industry. Plus, it helps us to understand why hard luxury brands chose to implement an omnichannel strategy.

Consensus on Omnichannel Strategy

All interviewees acknowledge the significance of an omnichannel approach in the hard luxury industry, which is viewed as essential for maintaining customer engagement and loyalty. They emphasize the need for a seamless integration of physical and digital touchpoints to provide customers with a consistent brand experience across all channels. In order to achieve this omnichannel strategy, several levers can be deployed.

Veronica Poli talks about Integrated Marketing Communication in order to share a consistent message through all the channels and enhance the customer experience.

Sarah Halily focuses on being “isolate” which means there is no difference between the experience and conditions in store and online. For example, the return policy has to be the same and explicit so clients don't feel confused when they purchase an item either online or in-store. Plus, a client should be able to return an item purchased online to a store to ensure a seamless customer experience.

At Boucheron, Claire Nicolas explains how difficult it is to follow an omnichannel strategy because it is B2B2C. In fact, Boucheron sells their jewels to partners which sells to end-customers. In order to achieve this strategy, Boucheron implements features such as find in store, book an appointment, so clients do not struggle to find what they are looking for.

By comparison to the literature review, hard luxury brands opt for the strategy to include digital channels to their existing scope of physical channels just like Aiolfi and Sabbadin (2017) explained. While the literature review provides us with precautions and context, the results of these interviews give us concrete tools and approaches in order to achieve a seamless omnichannel strategy.

Critical Features for Hard Luxury Brands

The research identified specific features that are considered paramount for success in the hard luxury industry. In order to support an omnichannel strategy, as explained previously, hard luxury brands need to implement features that blend human with digital.

Firstly, interviewees agree on the need for certain features, including “booking an appointment” on the e-commerce website. For instance, when clients browse the Pomellato website, they can find on the customer service page a tab where they can book an appointment either in Pomellato boutiques or virtually. In both cases, it allows clients to live a personalized experience as a Sales Associate will take time to answer all questions, and assist them to choose the item that answers their desires. Plus clients benefit from the Sales Associate's expertise on the quality, materials and aftercare. From a hard luxury brand's view, it is also a way to do cross-selling, which is selling related items, and upselling, which is

selling a similar product but with a higher price. Indeed, the Sales Associate has the time to understand clients and propose them with the best. Overall, it elevates customer experience.

Secondly, the findings through these interviews also focus on a 3D product viewer to provide an interactive and immersive product experience. In fact, this feature is a way to face the challenge of reproducing the experience in physical stores. Thanks to the implementation of 3D product viewer on product pages on websites, clients can interact with items, rotate and zoom on them which results in a higher level of authenticity and realism to build confidence in the purchasing decision. In fact, it is a tool to showcase items.

Thirdly, there is the virtual try-on feature to allow clients to visualize products before purchase. From their own place, clients are able to try on a necklace, a ring or a watch and see how it suits them, thanks to augmented reality (AR). This digital technology creates an immersive and personalized experience. Allowing clients to try an item from their place is a way to boost conversion. In fact, it instills confidence and reassures clients before taking a purchasing decision. By trying an item, they know that it will fit their aesthetic, their desires. Besides, it is a game-changer as the experience through this feature can be totally personalized by selecting the gem, the material, the shape, etc.

Finally, Veronica Poli explains that a personalized newsletter is sent to clients to communicate on special events and treatments in Pomellato stores. Newsletter is a great tool to engage and create awareness about new collections, events and important information on hard luxury items. Moreover, Pomellato contacts its Very Important Clients, also known as VIC, through video calls to invite them to their showroom which creates a hyper-personalized experience, using both online and offline channels.

These features are essential for bridging the gap between the physical and digital realms. They seamlessly mix digital innovation with personalization, through an immersive experience and they empower clients to make a purchase decision in order to leverage customer experience in the hard luxury industry. This part completes the literature review by explaining how each feature is an added value for clients.

Data at the Core of the Strategy

One of the main shared topics between the literature review and the analysis is data. It is crystal clear that data is crucial to leverage customer experience in the hard luxury industry.

Firstly, it is essential to hyper-personalize the customer experience. In fact, by collecting and sorting data, hard luxury brands are able to understand the client's behavior, purchasing habits and desires. Even better than understanding, data allows hard luxury brands to anticipate clients needs and desires. Therefore, brands can proactively recommend items from the latest collections that will match previous purchases through newsletter, video calls, etc.

Besides, qualitative data, such as verbatims collected through reviews, are a rich source of insights to improve customer experience. In fact, verbatims are the words expressed by clients to share their feelings, and experience. This data allows

brands to optimize the customer journey, reduce frictions at some touchpoints, specifically on the checkout page, and increase performances.

Nevertheless, hard luxury brands must be careful with data privacy stakes. It is even more important in this industry because clients may be important people, celebrities, and also because the amount spent is higher compared to other industries. Plus, there are regulations around the world regarding data privacy. The personalization of the customer experience must not cross the line of invasion.

Testing Environment

Digitalization resulted in new processes and methods in order to enhance customer experience. Veronica Poli and Claire Nicolas both talk about A/B testing which is a method used to compare two versions of an application or website's page for example, and determine which one is the best. Thanks to this method, hard luxury brands are able to optimize their strategy and improve the user-friendliness of their channels. As it is already explained, the omnichannel strategy needs to be seamless which means there is no friction while switching from a channel to another. This method allows to reduce the risk of frictions. As Sarah Halily says, it is important to be data-driven and the use of such methods allows brands to have proof of the efficiency of a decision rather than assumptions. In the end, clients benefit from such methods.

Higher Expectations compared to Fashion Luxury

Thanks to digital innovation, data and the omnichannel strategy, hard luxury brands have the keys to fulfill client's desires and expectations. Veronica Poli and Claire Nicolas, who are both working for famous premium jewelry brands, agree that expectations are higher in this industry compared to others. In fact, the attention to details is paramount and these consumers clearly want a very special treatment compared to the luxury fashion industry.

For example, the purchase of a watch is perceived as an investment and potentially as an heirloom. Furthermore, the price depends on the level of detail, quality and reputation. Buying a watch from Patek Philippe, the famous Geneva watch manufacturer, is a unique experience, not least because it is an emblematic brand in this sector, and editions are very limited. Therefore, hard luxury brands have an extra pressure to satisfy customer's expectations.

In the literature review, there are very few elements of the slight difference in expectations between the soft and hard luxury industries. The research helps us to understand the urge for hard luxury brands to accelerate their digital transformation.

The findings of this part of research highlight the key role of digitalization in the hard luxury industry, a transformation triggered by the global impact of Covid-19. As physical boutiques faced closures, brands swiftly integrated digital channels, emphasizing the need to translate the unique identity of luxury houses seamlessly from physical to online platforms. This meticulous translation includes elements such as decor, atmosphere, and overall experience, with the aim of enhancing the customer experience.

Moreover, the research emphasizes that being tech laggards can offer an advantage, allowing hard luxury brands to analyze and select the best practices for

their online presence. Accessibility emerged as a significant benefit, offering clients the convenience of shopping from their homes, bypassing the need to visit boutique locations. Additionally, online platforms provide a comfortable environment for clients who may find entering a physical boutique intimidating.

Preserving exclusivity and sophistication in the digital space proved to be a notable challenge for luxury brands. Strategies like replicating the atmosphere of iconic boutiques on websites, as exemplified by Boucheron's approach, play a crucial role in instilling confidence in clients' purchasing decisions. This is particularly relevant given the tendency of "logic shoppers" to gravitate towards well-known brands without specific brand loyalty. This transition, as highlighted by Veronica Polli, is not merely an option, but a mandatory step in adapting to the evolving landscape.

The adoption of an omnichannel strategy emerged as a consensus among all interviewees, underlining its important role in maintaining customer engagement and loyalty. Integrated Marketing Communication, seamless experiences across online and in-store environments, and implementing features like "find in store" and "booking an appointment", "3D product viewers", "virtual try-on" features, and hyper-personalized newsletters, all aimed at bridging the gap between physical and digital experiences. These insights complement existing literature by providing practical tools and approaches to achieve a seamless omnichannel strategy.

Data emerged as a cornerstone of the strategy, enabling hyper-personalization of customer experiences. Understanding client behavior, preferences, and purchasing habits through data analysis empowers brands to proactively cater to clients' needs. Qualitative data, particularly verbatims from customer reviews, offer valuable insights to enhance the customer journey. However, it is imperative for brands to navigate data privacy concerns, especially given the prominence of high-profile clients and stringent privacy regulations.

A/B testing emerged as a crucial method for optimizing strategies and user-friendliness across channels. Being data-driven allows brands to make informed decisions based on concrete evidence rather than assumptions, ultimately benefiting clients through a seamless experience.

Lastly, the research shed light on the elevated expectations within the hard luxury industry compared to other industries. The meticulous attention to detail and the significance of hard luxury purchases as investments or heirlooms contribute to heightened consumer demands. This finding supplements existing literature, offering deeper insights into the urgency for hard luxury brands to accelerate their digital transformation efforts.

In sum, this research provides practical strategies and insights for hard luxury brands to navigate the digital landscape while upholding their legacy of exclusivity, sophistication, and exceptional customer experiences. By leveraging data, adopting an omnichannel approach, and implementing critical features, hard luxury brands can thrive in an increasingly digital world.

Results of the Survey

In the transitional landscape of the luxury industry, where timeless elegance meets advanced technology, the pursuit of exquisite experience has taken on new dimensions. As part of the primary data collection for this method research, the survey analysis aims at identifying and understanding the complex dynamics shaping the luxury industry, especially the hard luxury industry. The fusion of craftsmanship with technology has given rise to a host of opportunities and challenges. Indeed, the digital transformation of the hard luxury market results in a series of pain points in the omnichannel strategy, aftersale services, conversion optimization and inventory management, all of which require thoughtful strategies.

Focus on an Omnichannel Strategy

Regarding the omnichannel strategy, respondents agree that luxury brands, including hard luxury ones, struggle to align their strategy both in stores and on e-commerce websites. The same DNA and emotions should be experienced by clients wherever they buy from. In other words, hard luxury brands have to maintain brand consistency, otherwise, any deviation from this unique and premium identity risks eroding the very essence that defines hard luxury brands. Besides, there is a strong tension between accessibility and the preservation of this sense of scarcity. Striking the right equilibrium, where both offline and online channels complement each other rather than compete, is a strategic imperative.

However, through the answers, all respondents agree that luxury brands want to focus on an omnichannel strategy. For instance, client services at Kering use Powerfront, a live-messaging software that allows to visualize and assist clients in real-time, with gamified visuals. This digital tool allows client services to connect with clients through different channels such as live chat, emails, WeChat, etc. Such platforms are great tools in order to centralize all the data, and operate quickly passing from one channel to another without changing the tool. Through seamless integration across online platforms, customers experience a holistic and interconnected engagement with brands. This omnicanality of the client experience ensures that every touchpoint, whether online or offline, contributes to a unified and compelling brand narrative.

The respondents agree that one of the most profound impacts of this omnichannel paradigm shift is evident in the evolution of the customer journey. Luxury clientele, now more than ever, leverage digital resources to carefully build their knowledge base on brands and products. This shift in behavior emphasizes the imperative for hard luxury brands to preserve a captivating online presence, one that not only shares information but also captivates and surprises, mirroring the wealth and exclusivity associated with the hard luxury domain.

To a great extent, the success of an omnichannel strategy relies on the seamlessness of the digital experience, particularly on mobile devices. Given that mobile platforms have become the preferred conduit for accessing product information, receiving prompt answers, and accessing services, it is imperative that the mobile experience is nothing short of exceptional.

In this dynamic landscape, hard luxury brands must take a visionary approach, recognizing that the digital realm is not merely an extension of the physical, but a distinct arena where customer engagement reaches new heights

Whether in literature review or in interviews, the omnichannel strategy is the common denominator.

Digital Transformation

Although digital transformation allows clients to receive their parcel directly at home, it challenges the luxury after sales service. For instance, luxury brands have difficulty to align the in-store return and exchange policy with the online policy while it is possible for mass market brands. Plus, after sales services are personalized in store thanks to Sales Associates, but it is more complex through digital channels which requires a great effort from Sales Advisors who assist clients through phone calls, emails, live chat, etc.

Nevertheless, 40% of respondents explained that digitalization allows clients to get any information they may need before completing a purchase. For instance, on an e-commerce website, clients are able to evaluate which size to choose through the size guide feature. Besides, key elements such as materials and dimensions are highlighted on a product page. From the client's point of view, the presence of this information is time saving and it helps to reassure the client and push the conversion. We can add the importance of a complete and user-friendly Q&A page. For instance, hard luxury brands such as Cartier or Tiffany & Co, offer items with significant price tags and very high quality items. Therefore, these clients are even more cautious before proceeding to this kind of purchase. The craftsmanship and unique features and materials need to be highlighted for the client in order to compensate for the lack of face-to-face exchanges with a Sales Advisor in a physical store.

Challenge on Conversion

In the dynamic landscape of hard luxury retail, the process of conversion has undergone a profound evolution, intertwining with several key themes identified previously. Formerly, clients who may have harbored worries about entering a physical luxury store to acquire their coveted piece are now empowered to make their dreams a reality through online channels. However, this transition necessitates meticulous attention to detail to ensure a seamless and gratifying experience.

Despite the absence of face-to-face interaction with a Sales Advisor, it is imperative that clients are equipped with all the essential information they require to confidently complete their purchase. This includes key details such as a comprehensive size guide, insights into materials used, and a transparent returns and exchanges policy. These elements serve as the base of informed decision-making, empowering clients to proceed with their purchase with confidence.

Moreover, the ease and efficiency of the conversion process hinge on the user-friendliness of the website and application. A frictionless experience is paramount; clients should be able to navigate, explore, and finalize their order with just a few clicks. This seamless journey not only expedites the conversion process

but also underscores the brand's commitment to providing a superlative online shopping experience.

This topic of conversion is intimately linked with the emotional theme that hard luxury brands seek to evoke. Providing clients with the right information not only imparts a sense of reassurance but also dismantles any lingering reluctance they may have towards purchasing through an e-commerce platform. It is essential in optimizing brand awareness on the digital sphere, nurturing a sense of trust and affinity with the brand.

However, in the digital realm, immediacy is of the essence. The digital transformation has instilled a sense of urgency among clients, who now expect prompt assistance. A delay of a few seconds can potentially lead them to seek out similar offerings from competing brands. Thus, responsiveness and real-time support are critical components in securing conversions and retaining client loyalty.

Therefore, the process of conversion in the digital age demands a meticulously crafted approach that seamlessly integrates information accessibility, user-friendliness, and instantaneous assistance. By prioritizing these elements, luxury brands not only facilitate transactions but also cultivate a profound sense of trust and affinity with their discerning clientele. In doing so, they not only navigate the digital landscape but emerge as trailblazers in providing unparalleled online shopping experiences.

Challenge on the Inventory Management

Last but not least, there is a challenge regarding inventory management. As previously explained, there is a dichotomy between luxury items partly defined by its scarcity, and digitalization defined by its accessibility. The digital transformation of the hard luxury industry results in finding the right balance between scarcity and satisfying numerous clients who are able to purchase online. Moreover, these brands have to ensure the safe journey of high-value items. Several elements have to be considered: trust in the shipping partners, solid but elegant packaging, punctuality and the speed of delivery.

The answers of the survey highlight several challenges that are consistent with those of the literature review. Yet, amidst these challenges, a bunch of possibilities have emerged. The survey analysis highlights promising paths within the digital landscape. These include harnessing the power of data to drive decision-making and better understand clients' expectations, enhancing brand awareness through new channels, targeting clients at a larger scale, and fostering innovation that will redefine the luxury experience.

Digital Innovations to Elevate the Customer Experience

One of the most important topics in the survey is personalization. In the field of hard luxury, where expectations are elevated and discernment is paramount, personalization emerges as a necessity in the customer experience. In fact, 60% of respondents underscored its significance, highlighting the high demand for a personalized journey in this exclusive market. To meet these exacting standards,

hard luxury brands must replicate the exquisite, tailored encounters typically found within physical stores across the entire digital landscape.

A big part of this endeavor lies in the seamless integration of personalization throughout the online customer journey. This entails a multifaceted approach, encompassing targeted digital campaigns, a meticulously after-sales process, and a website built with bespoke features. Each touchpoint must exude a sense of individual attention, ensuring that clients feel not only valued but also understood.

Central to addressing these imperatives is the overarching theme of digital innovation. This dynamic element serves as the pivot for achieving both brand awareness and conversion goals. Clients should be afforded the opportunity to not only explore, but also truly admire, any item from afar. To facilitate this, indispensable features such as virtual try-on capabilities and a 360° product viewer become essential. These innovations bridge the physical and digital spheres, offering clients an immersive experience that mirrors the tactile sensations of an in-store journey.

Moreover, as clients progress towards the crucial checkout step, flexibility and convenience become important. A diverse array of payment methods should be seamlessly integrated to cater to a wide spectrum of clients, cognizant of the substantial investment often associated with hard luxury items. This inclusivity not only accommodates varying preferences but also reinforces the brand's commitment to accessibility and customer-centricity.

Finally, the metaverse stands as an opportunity for hard luxury brands to revolutionize customer engagement. By creating immersive, virtual environments, brands can captivate their clientele with innovative and unforgettable experiences. These interactions leave a lasting impression on the customer's psyche, solidifying brand loyalty and forging emotional connections. In fact, the metaverse offers luxury brands a platform to showcase their forward-thinking nature. By adopting metaverse technologies, luxury *Maisons* demonstrate their commitment to innovation and adaptability, dispelling any notions of being 'out of touch'. This is particularly crucial in attracting the tech-savvy Gen Z consumer base, which values brands that are aligned with the pulse of modernity.

Moreover, blockchain technology presents a groundbreaking opportunity for the hard luxury industry to establish complete product traceability. By leveraging blockchain's immutable ledger, brands can track every facet of a product's journey, from its inception to the hands of the end consumer. This transparency gives a sense of trust in the authenticity and provenance of hard luxury materials such as gems.

Gen Z, with their penchant for Web3 technologies, have already begun investing in NFTs and engaging with digital assets. For hard luxury brands, aligning with these preferences is imperative to demonstrate relevance and resonance with this influential consumer demographic. Otherwise, hard luxury brands may lose a vital segment of the market.

Overall, this approach not only attracts a diverse clientele but also solidifies the industry's reputation as pioneers in the digital landscape.

Key Findings and Insights on Survey

While the interviews provide us with concrete solutions to develop, the survey provides an understanding of the challenges and opportunities related to digitalization. In fact, some important challenges are highlighted in both the literature review and the survey analysis, which include the inventory management, the struggle to deal with digital channels and catching up on online channels optimization to increase conversion and engagement.

At the end of this analysis, we can definitely understand the importance of implementing an omnichannel strategy as it marks a watershed moment in customer engagement. The digital environment, now the primary gateway to luxury experiences, redefines the customer experience, demanding an elevated standard of engagement. A seamless mobile experience is paramount, as it is through this medium that clients seek information, answers, and services at a pace that befits the luxury landscape. By embracing this transformation, luxury brands not only adapt to the digital age but pioneer a new era of opulent, interconnected experiences.

Besides, personalization stands as a pivotal factor in shaping the customer experience within the hard luxury industry. Its seamless integration across digital touchpoints is instrumental in replicating the bespoke encounters synonymous with physical stores. At the heart of this transformation lies digital innovation, driving brand visibility and conversion rates. Features like virtual try-ons and immersive product viewers bridge the gap between physical and digital, offering clients a rich, interactive experience. Additionally, diverse payment options ensure a smooth and accommodating checkout process. Finally, a metaverse environment is also an opportunity for hard luxury brands to be perceived as trailblazers.

By embracing these elements, hard luxury brands not only meet but exceed the exacting standards of their discerning clientele, forging a lasting and profound connection in the digital age.

Findings, Discussion and Conclusions

The confluence of external forces, notably the impact of the Covid-19 pandemic, has compelled luxury brands to undergo a paradigm shift in their business models, propelling them into the realm of digital transformation. This transition, while filled with challenges, has raised crucial questions. How can the core values of hard luxury be preserved amidst the creation of accessible digital touchpoints? And crucially, how is it possible to seamlessly orchestrate an omnichannel strategy that provides clients with a premium experience?

In this digital age, supported by the emergence of Web 3.0, luxury brands, particularly those in the hard luxury sphere, find themselves at an inflection point. The landscape they once epitomized is evolving, necessitating a delicate dance between heritage and innovation.

In essence, the digital transformation has been nothing short of a revolution in the realm of hard luxury. It has heralded an era where boundaries blur, and where the discerning clientele are no longer confined by the walls of a physical boutique. The impact on customer experience is profound and far-reaching.

The once insurmountable challenge of preserving the essence of craftsmanship and luxury values while creating accessible digital touchpoints has been met with a triumph of ingenuity. Through careful uses of digital spaces, hard luxury brands have found a way to transposing the ambiance of their iconic boutiques onto online platforms. This transition is more than a technological feat; it is a preservation of the brand's legacy and image.

The premium experience has transcended physical boundaries. Clients now embark on a journey directly from their own homes. The intimidation that may accompany a visit to a boutique is replaced by a digital embrace that exudes warmth and sophistication. Through virtual try-ons and 3D product viewers, clients can interact with items in a manner that rivals the in-person experience, instilling confidence and conviction in their purchasing decisions.

The omnichannel strategy, once a mere concept, has evolved into a dynamic reality. Integrated Marketing Communication, hyper-personalized newsletters, and features like "find in store" and "booking an appointment" bridge the gap between physical and digital touchpoints, offering clients a seamless journey. The symphony of channels harmonizes into an orchestrated experience that transcends the limitations of any single medium.

Data, the premise of this digital revolution, offers many possibilities. It grants hard luxury brands the ability to not only understand but anticipate their clients' needs. Through qualitative insights gleaned from verbatims, brands refine the customer journey, smoothing frictions and elevating experiences. However, amidst this treasure trove of data, brands bear the solemn responsibility of safeguarding the sanctity of client privacy.

In conclusion, the impact on customer experience is evident in every facet, from the comfort of virtual try-ons to the sophistication of hyper-personalized newsletters. In this digital age, luxury knows no boundaries, and the customer experience stands as a testament to this enduring legacy of craftsmanship and excellence.

Recommendations

Given the insights gleaned from this thesis, it is strongly advised that hard luxury brands implement a "test and learn" approach. This can be achieved through methods such as A/B testing or the utilization of Proof of Concept (POC) trials. These techniques allow brands to experiment with new digital strategies in controlled environments, enabling them to gauge effectiveness and fine-tune initiatives before full-scale implementation. This iterative approach can significantly enhance the precision and impact of digital transformation efforts.

It is crucial for hard luxury brands not to overlook the significance of after-sale services. Post-purchase experiences are integral in sustaining customer satisfaction and loyalty. Ensuring seamless processes for repairs, maintenance, and customer support not only fortifies the brand-customer relationship but also contributes to positive word-of-mouth and long-term brand advocacy.

These recommendations aim to provide actionable strategies for hard luxury brands looking to optimize their digital transformation efforts and enhance overall customer experience. By incorporating a test and learn approach and prioritizing after-sale services, brands can position themselves for sustained success in an increasingly competitive luxury market.

Limitations

The thesis delves into the digital transformation of the luxury industry, seeking to enhance customer experience through strategic interventions. However, there are several notable limitations that warrant consideration.

Firstly, the literature review exhibits a gap in addressing the hard luxury industry. In fact, it falls short in providing concrete actions for optimizing the digital transformation process, which could hinder practical implementation.

While qualitative analysis proves invaluable in narrowing the information gap, the research primarily focuses on brands within the Kering luxury group. While this provides valuable insights into a cohesive vision and strategy, it may not capture the diversity of approaches found in other luxury groups. This narrow scope may limit the generalizability of the findings. Indeed, the selection of brands within the Kering group introduces a potential bias, as these brands may possess specific characteristics or strategies that differ significantly from other luxury brands. This bias should be acknowledged to provide a more balanced perspective.

Furthermore, the absence of a case study poses a challenge. While confidentiality concerns are valid, exploring alternative methods for obtaining pertinent case study data could significantly strengthen the depth of analysis and practical applicability of the research.

Finally, the digital sphere is constantly expanding, with an ever-increasing number of digital innovations, and it's a complex environment in which to evolve. This thesis therefore needs to be updated in order to propose relevant actions in step with the times.

While the article offers valuable contributions to the understanding of digital transformation and customer experience enhancement in the luxury industry, these identified limitations underscore the need for a nuanced interpretation of the research findings. Recognizing these constraints enables a more comprehensive evaluation of the scope and applicability of the research.

References

- Aiolfi S, Sabbadin E (2017) The new paradigm of the omnichannel retailing: key drivers, new challenges and potential outcomes resulting from the adoption of an omnichannel approach. *International Journal of Business and Management* 13(1), 85.
- Alnuaimi N, Almemari A, Madine M, Salah K, Breiki A-H, Jayaraman R (2022) *NFT certificates and proof of delivery for fine jewelry and gemstones*. Available at: <https://doi.org/10.1109/access.2022.3208698>.

- Amed I, Berg A, Thiel A, Becker S, Harris T, Ortelli M, et al. (2021) *The State of Fashion Watches & Jewellery*. Business of Fashion and McKinsey & Company.
- Barbat V, Bourée F, Lonchambon J, Moukarzel L (2018) *The Luxury Omnichannel Dilemma*. PwC.
- Bouwman H, Nikou S, de Reuver M (2019) *Digitalization, business models, and SMEs: How do business model innovation practices improve performance of digitalizing SMEs?* Telecommunications Policy.
- Briones E (2022) *Luxe et digital: les nouveaux territoires du luxe*. (Luxury and digital: the new territories of luxury). 2nd Edition. DUNOD.
- Cappellieri A, Rossato B, Tenuta L, Testa S (2022) *Digital Filters: a New Way to E-Wear Jewelry*. Available at: https://www.researchgate.net/publication/354492165_Digital_Filters_A_New_Way_to_E-Wear_Jewellery.
- Dai Z, Chiu W, Chi H, Lin P (2022) *Digital Transformation through Business Model Innovation: an Exploratory Case Study in Jewelry Industry*. Available at: https://www.researchgate.net/publication/366000243_DIGITAL_TRANSFORMATION_THROUGH_BUSINESS_MODEL_INNOVATIONAN_EXPLORATORY_CASE_STUDY_IN_JEWELRY_INDUSTRY.
- Faccioli G, Sheehan E (2021) *Global Power of Luxury Goods*. Deloitte.
- Gilbert S (2022) *Crypto, Web3 and the Metaverse*. University of Cambridge.
- Gupta DG, Shin H, Jain V (2022) Luxury Experience and Consumer Behavior: A Literature review. *Marketing Intelligence & Planning* 41(2): 199–213.
- Herhausen D, Binder J, Schoegel M, Herrmann A (2015) Integrating bricks with clicks: retailer-level and channel-level outcomes of online–offline channel integration. *Journal of Retailing* 91(2): 309–325.
- Klaus P, Tynan C (2022) The future of luxury management – 5 megatrends that are here to stay: guidance for researchers and managers. *Journal of Marketing Management* 38(13–14): 1271–1277.
- Park M (2020) Storytelling and Social Networking: Why Luxury Brand Needs to Tell Its Story. *Journal of Information Technology Applications & Management* 27(5): 6–80.
- Pietrzak J (2019) *Mass Prestige Brands - the end of traditional luxury brand marketing?* Available at: https://www.researchgate.net/publication/347194331_Mass_Prestige_brands_-_the_end_of_traditional_luxury_brand_marketing.
- Remy N, Catena M, Durand-Servoingt B (2015) *Digital inside: get wired for the ultimate luxury experience*. McKinsey & Company.
- Romo ZF, García Medina I, Plaza Romero N (2017) Storytelling and social networking as tools for digital and mobile marketing of luxury fashion brands. *International Journal of Interactive Mobile Technologies* 11(6): 136–149.
- Salesforce, Publicis Luxe and Epsilon (2021) *Towards a more connected and engaged luxury*. Available at: https://www.salesforce.com/content/dam/web/en_ie/www/PDF/luxury-epsilon-publicis-ebook.pdf.
- Swaminathan S, Anderson RE, Song L (2018) Building loyalty in e-commerce: Impact of business and customer characteristics. *Journal of Marketing Channels* 25(1–2): 22–35.
- Szegedi K, Boudrand J, Grampp M, Egerth K, Rohr D (2022) *The Deloitte Swiss Watch Industry*. Deloitte.
- Vitry D, Révis J, Le Bansais V, Mesmin T, Bourguignon D (2022) *Web3 and metaverses how to approach a brand-new world?* MAD.
- Zaki M, Neely A (2018) Customer Experience Analytics: Dynamic Customer - Centric Model. In *Service Science: Research and Innovations in the Service Economy*, 207–233.

Appendix

Appendix 1. Interview with Sarah Halily Realized in French

Présentation :

- Peux-tu te présenter en précisant ton parcours pro ?

Ecole de commerce et spé en innovation et entrepreneuriat

Stage cat management marché et elle s'est intéressée à la data au sein de Eggs Brand (dim, champion...)

Coca cola avec différents contrats et elle était dans l'incubateur de Coca pour casser les codes de la grande distri. Quelles marques avaient le potentiel pour le marché français ? Création de leur plateforme pour vendre leur innovation

Product management en agile aujourd'hui

E-commerce sur les nouvelles plateformes, data

Product owner gérer discovery (comprendre les besoins et trouver une solution) et delivery

Général:

- Comme tu as fait de la grande distri, constates-tu une différence niveau digitalisation de l'expérience client? Comparaison avec coca « jour et la nuit », les sites ne font pas suffisamment luxe, l'ADN ne ressort pas suffisamment, les process ne sont pas suffisamment agile ce qui fait que les projets n'avancent pas assez vite. Exemple: on est pas capable de prendre un rdv correctement en ligne pour aller en boutique... gros retard. Pain point: pick up in store beaucoup trop long. Retard omnicanal, les politiques retour ne sont pas les mêmes sur in store et en ligne = incohérence. Assurer une bonne delivery dans les informations. 1 retour sur 2 on doit contacter
- Quels seraient les leviers nécessaires du coup pour palier à ce retard? Notamment si on prend une marque comme Boucheron? Refaire la base, Boucheron par ex: sur le site e-commerce, être isolate cad pas de différences dans les boutiques, un sizing clair, le chat performant pour assister au mieux. Mise en avant les différents services,

Focus expérience fluide, et info nécessaire

Evènement en ligne pour montrer les produits de manière exclusif (cf Gucci et live show). Recommandation produit grâce à l'intelligence artificielle grâce à la data (quand il a commandé dernièrement pour pousser à un autre achat)

- Depuis que tu es chez Kering, as-tu constaté une accélération de la digitalisation? Si oui, pourquoi? Beaucoup d'efforts, POC book an appointment. Validation longue entre groupe et marque. Avantage marques joaillerie, elles peuvent plus facilement faire des POC, faire des pilotes pour lancer de nouvelles fonctionnalités. Vision data-driven, partenariat avec Ipsos pour capturer la data...
- Quels challenges posent la digitalisation du secteur du luxe ? Penses-tu que ce sont les mêmes challenges pour le segment de la joaillerie et haute joaillerie ?
- Penses-tu que la digitalisation de l'expérience client est une opportunité ou une menace pour le secteur du luxe ?

Opportunités: aller plus vite et conquérir de nouveaux marchés (ex Asie) comme on est en retard on a pu apprendre + hyper personnalisation et c'est nécessaire pour personnaliser et pousser l'expérience client. On peut même anticiper les besoins

Challenges: beaucoup d'outils et il faut pas se laisser polluer par tout. La data pour la data pas utile, il faut prioriser. Il faut d'abord les bases avant de se lancer sur outils compliqués

Leviers:

- Comme tu travailles sur le NPS, en quoi est-ce un outil digital intéressant pour une marque de luxe? Est-il applicable à la joaillerie et la haute joaillerie?

Boucheron va lancer le NPS. Outil intéressant pour comprendre le client, et c'est des commentaires nécessaires et outil clienteling génial pour les SA en fonction de la réponse

Super pour créer les roadmap. Ex: saint laurent pour optimiser leur nouveau site

Importance du verbatim client

- En plus du NPS, peux-tu citer d'autres indicateurs intéressants pour évaluer la satisfaction et les potentiels pain points de l'expérience client en ligne dans le luxe?

Effort score, au niveau du CS, dans le luxe on cherche le contact, satisfaction globale

- Pour toi, quels seraient les leviers clés pour une expérience omnicanale optimale?
- Selon toi, l'intelligence artificielle peut-elle être un moyen d'améliorer et de pousser l'expérience client ? N'est-il pas préférable d'avoir des humains pour assister et personnalisé chaque expérience ? L'humain là où il y a le plus de valeur ajouté donc sur le contact mais sur le reste on peut faire de l'intelligence artificielle pour limiter les erreurs. Exemple de chat gpt avec Powerfront (suggestion de textes automatique où l'advisor décide ou non de prendre cette suggestion mais c'est une manière) mais c'est à l'humain de rappeler le client. AI et humain sont complémentaires

Data:

- Comment le secteur du luxe se sert de la data pour améliorer l'expérience client?

Respecter la privacy et connaître le client. On exploite pas suffisamment la data pour permettre de recommander. Génial pour la segmentation et hyperpersonnalisation. Créer des personas par client pour connaître, anticiper et les stimuler dans leur expérience client (ex: les inviter à des événements, faire des reco nouvelle co), développer la loyauté

Hard luxury:

- Concernant la joaillerie et haute joaillerie, par exemple, quels leviers Boucheron pourrait utiliser pour développer l'expérience client en ligne? (book an appointment...)

Journey omnical qui fonctionne, transposer l'expérience retail avec l'expérience digitale, créer de véritable digital stores

Appendix 2. Interview with Veronica Poli realized in English

Présentation:

E-commerce project coordinator, front-end projects

Project management with internal and external stakeholders

Digital transformation team

Questions:

- When did you notice the **acceleration** of the digital movement?
Several years ago, today it is mandatory. The higher spends are more likely to spend online
- Is it possible to **conciliate** the values in the luxury industry with digitalization?
It is a challenge, hard to find the connexion between both but it is essential to do it.
- As a high-end jewelry brand, what are the **challenges** and **opportunities** regarding the digitalization of the customer experience? Challenges: clients easily move from a brand to another if they are not satisfied, ads are unfiltered and may disturb them, they expect more entertainment online and more engagement

Opportunities increasing inputs, great to target younger generation, easier to measure engagement and loyalty thanks to analytics, customers want to receive 24h 7j services and offer personalized services

- What **strategy** are Pomellato and DoDo following to **enhance the digital customer experience**?

Customer centric, omnichannel strategy, integrated marketing communication, personalization regarding jewels, working on engraving process online, book an appointment online, working on proactive rules, AI to study the CX and activity online and tailor their experience

- **AI** ?

At the beginning Pom thought that AI was more fitting with a brand like Amazon, and AI is hard to use in high-end jewelry but it is great to monitor and find out the preferences => opportunity to study data and personalize

- Do you work with a test and learn approach? If yes, what are the benefits?
If no, what is your approach at Pomellato and DoDo?

They don't really use the test and learn but similar with AB test and then take decision to launch the project or no. Within Kering it facilitates the test and learn approach as the group proposes some features that could fit both brands. Inspiration if another brand already implemented the feature the expectations are clearer

- How do you **measure the success** of your digital initiatives on customer experience?

Monitoring phases thanks to Google Analytics, ROI which is essential

- Do you have any specific **innovations** that significantly leveraged the digital customer experience?

Book an appointment, whatsapp touchpoint recently activated but it is still.

- What are the main **trends** observed concerning online customer behavior?

1. Increasing on customer demand on transparency through material origin, sustainability (ups neutral delivery), they choose which brand to be loyal to if the brand fulfill all requirements
2. Human element, interaction and engagement with the brand, importance to keep the human and book an appointment is a good feature to meet the SA, video chat feature
3. Younger generation that purchase online
 - Do you believe that customer **expectations** are even higher for a hard luxury brand compared to a luxury fashion brand?

I think so, it is more expected as hard luxury brand, importance of details is more importance, importance of customization, they want to feel special

VIC => video conference, POM directly contact the VIC to invite them to showroom in order to buy, super personalize experience, one to one newsletter to communicate special events and treatments (rpomellato)

- What are your **next steps** to leverage the online customer experience?

Pick up in store and reserve store to enhance CX

Advice: luxury brands should have even more customized services compared to other brands. Even the website should be tailored

Appendix 3. *Interview with Claire Nicolas Realized in French*

Intégrée il y a près de 3 ans, stage de fin de 6 mois en CRM (comment collecter les données, activation à travers des emailings, gifting etc), opportunité pour un CDI pour développer le site marchand.

Garantir expérience client sur le site, faire ressortir l'ADN de Boucheron, pousser à la conversion. La part en ligne est très petite mais permet de faciliter

Questions:

- En tant que marque de joaillerie et haute joaillerie, quels sont les **défis** et les **opportunités** liés à la digitalisation de l'expérience client ?

Défis: préserver l'expérience luxe alors que le digital est associé à amazon par exemple. Préserver le tone of voice de la marque, garder les aspects clés d'une boutique

Reprise des codes boutiques comme le marbre vert de la boutique place vendôme

Réussir à garder l'émotion à travers le online alors que le client est face à son ordo

Rassurer le client, l'aider à passer à l'achat

RGPD: respect des données clients, certains projets se heurtent à cet enjeu

Opportunités:

Peu de boutiques en France donc une grosse partie de la population n'a pas accès + permet d'atteindre des clients frileux d'aller en boutique luxe Permettre de se faire connaître à grande échelle

Promouvoir de manière nouvelle et ludique comme la 3D

3D va mieux voir la pièce donc rassure et aide à la conversion

Montre que la Maison innove ce qui renforce l'expérience marque = le site est bien fait

Peut-être impulsion du covid pour accélérer la digitalisation, se mettre à la page mais depuis 2021 Boucheron souhaite être pionnier mtnt

Se démarquer

- Quelle **stratégie** Boucheron suit-elle pour améliorer l'expérience digitale de ses clients ?

Stratégie omnicanale, B2B2C, Boucheron vend au partenaire et qui vend au client, mais difficile d'être omnicanale à 100% mais des fonctionnalités pour l'être comme find in store, book an appointment

Stratégie de respecter le tone of voice sur le site pour développer l'awareness, mettre en avant

Fonctionnalité idéale pour la joaillerie, mais ça dépend de la région

Book an appointment rassure et permet de concrétiser le projet d'achat d'un client, assurer la prise en charge une fois arrivée en boutique

- Travaillez-vous selon une **approche** "test and learn"? Si oui, quels en sont les avantages ? Sinon, quelle est votre approche chez Boucheron?

Ça dépend un peu test and learn avec AB Test pour des petites optimisations sur le texte par exemple. C'est intéressant pour avoir des chiffres pour justifier le lancement d'un projet ou non

Importance des tests utilisateurs pour savoir si le message est compris

Résultat proche de la réalité

- Comment **mesurez**-vous le succès de vos actions numériques en matière d'expérience client?

KPIs: donnée google analytics, bounce rate, temps sur la page, taux de click, taux d'abandon...

- Avez-vous des **innovations** spécifiques qui ont eu un effet de levier significatif sur l'expérience client digitale ?

Virtual try on, mix and match pour une collection haute joaillerie, le live chat pour avoir une réponse instantanée, 3D sort du lot

- Que pensez-vous de l'intelligence artificielle pour élever l'expérience client en ligne ?

Hyper intéressant pour personnaliser le parcours client au maximum, permettre de faire des suggestions sur le site

Boucheron très connu pour la bague Quatre mais c'est pas forcément le produit qui correspond à tous les clients

- Quelles sont les principales **tendances** observées en ce qui concerne le comportement des clients en ligne?

Surpris de la majorité des produits achetés est la bague, panier moyen très différent selon les pays, beaucoup d'abandon panier un peu comme wishlist mais ils utilisent pas la fonctionnalité wishlist

50/50 pour les clients jeunes et plus âgés boomers

- Pensez-vous que les **attentes** des clients sont encore plus fortes pour une marque de joaillerie et haute joaillerie que pour une marque de mode ?

Sur le site que de la joaillerie, et oui car il y a une symbolique propre à la joaillerie + la valeur perçue est plus importante que de la fashion donc les attentes sont plus élevées et justifient le fait d'être frileux

Comprendre l'expérience client en ligne est très informative, réel focus sur awareness, pour faire connaître les collections, importance de l'innovation servir le client le plus possible

Appendix 4. Survey Questions

Survey on the digitalization of the customer experience in the luxury industry.

4 Sept 2023

In order to fuel my Graduating Project (thesis), I would like to gather your experience and opinion on topics surrounding the digitalization of the customer experience, in the luxury industry. Thank you for the valuable time you are giving to this survey.

* Required

Personal information

1. Please write your full name: *

2. For which team do you work for? *

- ☐ Kering Corporate
- ☐ Kering Signature EMEA
- ☐ Kering Signature AMER
- ☐ Powerfront

3. Please write your job title: *

4. In your opinion, what is the main impact of digitalization on the luxury customer experience? *

5. How a luxury group, such as Kering, is working to enhance the online customer experience? Please give an example. *

6. What are the main pain points concerning the omnichannel strategy in the luxury industry? *

7. Regarding high-end jewelry, what is the main challenge that comes with digitalization? *

8. What major benefit can digitalization provide the hard luxury segment with? *

9. What is your opinion on the use of metaverse and blockchain in the luxury industry? *

10. Must your answers remain confidential? *

☐ Yes

☐ No

Appendix 5. Results from the Survey

For which team do you	Please write your job title:	In your opinion, what is the main impact of digitalization on the luxury customer experience	How a luxury group, such as Kering, is working to enhance the online customer experience
Kering Corporate	Ecommerce Client Service Project Manager	-digital is the front door for customer when they try to find information about a product -omnicannality of the client experience	Give as much information needed in order for the customer to be able to order a luxury product without seeing or trying the item. Ex: -Bag (BV) and heel (YSL) variation feature on front -360 assets (BAL) or virtual try on (AMQ)
Kering Corporate	Salesforce Service Cloud & Data Privacy Manager	The main impact is about the customer journey, how now luxury client will use digital information to build knowledge on the brand, the products before going in store or having physical experience. They want and expect to be surprised as well in the digital environment and benefit from outstanding services	* by building more personalized journey through the entire customer lifecycle (campaigns, website, client service, aftersales etc.) * by innovating (Next, innovation hub) to reach specific clients & surprise their customers * by adopting a client obsessed strategy : focusing on client only and their need * by adopting a omnichannel perspective
Kering Corporate	Product Manager Aftersales	Can be customer relations, because we have to offer the same luxurious, personalised experience as in physical stores.	Develop tools that allow you to know the customer by heart (powerfront)
Kering Corporate	Global trainer lead	Client -is becoming an expert of the Maison/products with all the information at disposal (product page, Q&A) -expect extra services (online product reservation, appointment...)/ contents / experiences -have a smooth experience specifically on mobile device as it is mostly used now -wants product, answers, services...fast	Kering is working on making the experience the more luxurious and frictionless possible, to make it easy for the client to access, discover, shop, pay (with new payment methods such as bitpay)... Latest improvements : Checkout refit / online exchange available for the clients / virtual try on
Kering Signature EMEA	Privacy Data Subject Requests Lead	There is much less tolerance on waiting. Everything has become urgent. And luxury becomes more "accessible". People who would not have dared to go to the Store now can inquire and buy directly from home. They feel less intimidated.	By quickly adapting to the new trends, testing, implementing new solutions. Such as the bitcoin as a currency in a Gucci Store.
What are the main pain points concerning the omnichannel strategy? Regarding high-end jewelry, what is the main challenge that comes with digitalization? What major benefit can digitalization provide the hard luxury segment with?			
To make sure all teams impacted are involved in projects			
* having the same amount of information and same level of client knowledge according to the touchpoint * aligning all teams on a common strategy from store, ecom etc.	to keep the luxury, provide an outstanding experience from the web		* opportunity to surprise client and build digital experience * innovate * better know your client
and provide acquisition levers for CA by offering to clients the right product at the right time	to see and appreciate the beauty of the jewel from a distance		most of all data for the luxury company. And for the client, be able to access everything immediately, and order and receive it wherever they want
- Still need improvements in the processes of aftersales / return / exchanges between the retail and online business - Too many different tools are used which complexify the adoption of new features / processes / agility etc...	Complexity of shipping high value item and not enough Maisons proposing virtual try on or 360° videos (for this value you want to see all the details of the piece in all angles)	Ecommerce is the greatest way for a Maison who cannot have stores everywhere to be known and accessible Visibility and access :	
Stock management and shipping issues.	The in-store luxury experience is lost. Receiving a parcel at home, even with the best courier service would never be like the full in store experience.	A higher reach. The niche of a store is nothing compared to the whole world. On the web, Brands can sell everywhere to anybody.	
What is your opinion on the use of metaverse and blockchain in the luxury industry? Must your answers refer to the luxury industry?			
			No
metaverse is amazing opportunity to bring innovation and surprise the client with exceptional experiences that will remain in their mind, blockchain is the opportunity to trace the product from beginning to the end			No
Gen Z are already spending on Web3 and already started collecting NFTs... so it's essential to show that luxury brands are in tune with the times and are not 'out of touch' if they want to attract young people.			No
Luxury industry are the most advanced on using metaverse and blockchain as a window. It is a way to reach another type of clients who likes Maisons being trailblazers.			No
It is fascinating if well implemented, but it might be obsolete if not well explained			No

Differentiation, Cost Leadership, or Ending Up in the Middle? A Reflection on the Viability of Porter's Generic Strategies through a Case Study Comparison of McDonalds and Starbucks

By Mehvish Bhat^{}, Ankur Agrawal[±] & Michail V. Barmpas[•]*

Why most businesses cannot retain any would-be competitive advantage even if they are the chief actors in a market or markets that it is them that have made profitable? Should we contemplate a current competitive advantage as a formula for uninterrupted success, or all is a misconception of a dominant paradigm that has locked the corporation to the profitable bygone days not letting them to look at the future and accordingly leaving behind profit prospects? The purpose of this study is to challenge the myth of sustainable competitive advantage presumably obtained through Porter's Generic Strategies framework by examining what really occurs in the fast-food market at present. This is done through an assessment of the Cost Leadership and Differentiation strategies seemingly applied in McDonalds and Starbucks respectively in relation to planning, accumulation and use of resources, and the generation of core competences (or internal dynamics), if any. And, to seek if it is possible, or not, to tie sustainability of any long-term earnings with these firms' best usage of in-house competencies as well as their skill to anticipate key environmental blows (or external dynamics). The writers adopt an interrogative attitude to the classical strategic management theory and, based on the results of the study, they go on to maintain the opinion that there is not such a thing as an advantage that is for ever viable. At the end of the study, the authors, again based on the results, suggest ways to increase the possibility of sustaining any strategic advantage for the specific firms. It is expected that these reflections will encourage more research in the area.

Keywords: *strategy, globalization, competitive advantage*

Introduction

Past research has shown that putting on a strategy right played for several years a vital role in the future of organizations (Johnson and Sherman 1990). In the past this seems to have happened because a strategy that was well scheduled and applied used to deliver a sustainable competitive advantage and to get to company realization in a more or less stable environment (Hodgkinson and Wright 2002, Mackay and McKiernan 2006). Nevertheless, this does not seem to be the case in the rapidly changing and uncertain business setting of the 2030's (El Namaki

^{*}PhD Scholar, School of Business Studies, Sharda University, India.

[±]Associate Professor, School of Business Studies, Sharda University, India.

[•]Professor, School of Business Studies, Sharda University, India.

2016). More recent research shows that although corporations apply strategy correct and succeed to grasp a competitive advantage for some time in one or more markets, the sustainability of any such benefit in itself seems to be problematical in our fast-changing world (Volberda et al. 2021, McGrath 2013). At this point the reader needs also to consider that important studies have similarly illustrated that for strategies to be successful in the gross unpredictability of today's markets, they have to be prolonged or contracted by the internal and external dynamics in a firm's operational setting (Schwab 2017). By 'internal dynamics' the authors of the present paper mean the core (or distinctive) competencies of the corporation (see: Prahalad and Hamel 1990). To explain this further, core competences are the unique strengths of the organization which are the results of using its resources effectively and efficiently, takes time to develop, cannot be copied by rivals, and can seemingly lead to a competitive advantage which can be either cost leadership or differentiation in its own right (van der Heijden 2005). Similarly, 'external dynamics' are the environmental predetermined elements, or the perceived certainties, on one hand, and the uncertainties, or the unpredictable elements, in a given environment on the other hand (Schwartz 1991). In strategic management implementation analysis these 'external dynamics' are always mapped with the degree of impact that they will have for a specific company that is planning for competitive advantage (Sarpong and Amankwah-Amoah 2016). It is argued that high impact uncertainties in a given firm may overturn any strategy in the organization (Eden and Ackermann 1998). Once this is done, then 'external dynamics' are combined with 'internal dynamics' to shape the possible future or different futures of a corporation, usually by developing foresight strategies or by applying scenario planning, both of which are having the ability to prepare us for multiple but equally plausible futures (Fuller and Loogma 2009, Hodgkinson and Healey 2008).

This being the situation, two factors seem to prop up the choice of a strategy in today's markets. The first is the attractiveness of a given market, in the short, medium and long terms (Porter 1985). The second is the relative positions of the different rivals in this market, and the internal capability of a certain company to use its competencies better than its competitors to create and possibly sustain a competitive advantage (Lauritzen and Karafyllia 2019). This work purposes first to detect the foremost entry barriers in a 'cash cow' industry, and subsequently to assess the validity and applicability, or not, of generic strategies by means of actual examples through an evaluation of the cost leadership approach applied by McDonalds and the differentiation tactics adopted in Starbucks. Mc Donalds and Starbucks are chosen to be discussed in this paper as they seem to present perfect examples of companies following a cost leadership versus a differentiation strategy, therefore making this contrast vibrant. This issue is discussed in detail later in this work. To come back to the cash cow discussion, a 'cash cow' industry is a market with products that are in a low growth category but for which a specific business has a relatively large market share (see Henderson 1970) such as the fast-food market which is dominated by McDonalds (196,526 million US\$) being in the first position, and Starbucks (61,759 million US\$) being in the second position on a global scale (Statista 2023). Therefore, these two firms are the protagonists of

the fast-food industry and present an interesting case to investigate further. Likewise, cost leadership and differentiation strategies are explained fully below. Likely prospects and pressures for the aforesaid market are also to be appraised. What the reader has to keep in mind at this point is that no sustainable competitive advantage seems to be possible without mapping the ‘internal dynamics’ with ‘external dynamics’, explained above, for the long term (Chia 2008).

The Methodology

The researchers have undertaken a series of in-depth interviews with Customer Service, Operations, Sales, and Finance managers from McDonalds’ and Starbucks’ operations in India followed by focus group discussions. In-depth interviews were chosen because they permit us to go much deeper into issues than any other method because they take a long speaking time and added insights are expected to be obtained (Harding 2018). Moreover, any anticipated prejudice on behalf of the interviewer is expected to be less than any other interview method (Alon et al. 2020, p. 161). In turn, focus groups are preferred because they can arrive to more widely acceptable insights and decisions when compared with decisions taken by single individuals (Manzano 2022). During the interviews the authors have acknowledged some specific subjects of primary interest, like ‘the use of existing resources’, ‘pricing, sales, and profitability’ and ‘any operational areas within the specific businesses that the interviewees considered as being weak or vice versus’, but had not a prescribed guide for the discussion. The reason for this was to let the interviewees express themselves openly and freely. The objective of these in-depth interviews and the subsequent focus group discussion sessions, was to identify any weak or strong use of resources by these two firms primarily in India but also to compare with what happens in their operations abroad, and how these resources would, as per the perceptions of the participants, turn to core competencies that in turn would possibly lead to a sustainable competitive advantage for these businesses in the future.

The reflections of the in-depth interviews and the focus group discussions have helped the writers to draw the Business Ideas of both the corporations at a later stage. As Wright and Goodwin write, a ‘Business Idea’, - that is a pictorial representation of how a firm gets any competitive advantage by using its knowledge, experience, talents, resources, and competencies, - helps to identify a company’s ‘internal dynamics’ (see Wright and Goodwin 1999) which is so crucial for this research in order to map ‘internal dynamics’ with ‘external dynamics’. Consequently, constructing the McDonalds’ and Starbucks’ Business Ideas with the contribution of workforce from these firms, has helped the writers, based on the expert knowledge gained in the discussions and the subsequent analysis, to categorize the current strengths and weaknesses of the selected organizations in a realistic manner and to suggest ways to achieve efficient and effective use of resources by these companies that may lead to operational improvements. Such enhancements could in turn open the way for a sustainable competitive advantage

under conditions of change. These recommendations, based on the analysis, are included in the conclusion of this work.

The Research Gap

To enable the construction of the Business Idea diagrams for the chosen companies, the Industry Life Cycle, Porter's 5 forces analysis, the Value Chain concept, and the Generic Strategies framework, are employed. However, although acumens of these tools have been used expensively in the construction of Business Ideas in previous studies (see van der Heijden et al. 2002, Santos et al. 2009), it is unsure if the insights of the above-mentioned analyses are fully applicable in the specific context, that is, if they can capture a realistic picture of 'internal dynamics' for McDonalds and Starbucks in their Business Ideas. This because, research suggests that some of these tools may be more applicable than others in specific situations, and some, like 5 forces analysis and the generic strategies, may not contribute at all in certain conditions given the unpredictability of the future (van der Heijden et al. 2005, Schwartz 1991). This being said, it seems to be a research gap as per the use and outcomes of these models in different situations. Despite the fact that these models are well tested in conditions of certainty (see Porter 1990, El-Namaki 2016), little is being said of whether or not they can work under situations of uncertainty and the total unpredictability of the future for the specific market – namely the fast-food industry (Ali and Ahmed 2023). Given this issue, this paper aims to shorten this gap. The authors of this work expect that the reflexions of discussing these models in relation to the Business Ideas of the two firms will help to test the models for validity and applicability in the specific setting and whether the models can contribute to linking 'internal dynamics' with 'external dynamics' which seems to be a requirement for sustaining any competitive advantage (see Schwab 2017, Sarpong and Amankwah-Amoah 2016, Prahalad and Hamel 1990, Schwartz 1991). The results of the analysis will form the basis for the recommendations at the end of the paper in addition to the insights of the Business Ideas.

Identifying a Growth Industry

The industry life cycle model is a handy tool for evaluating the effects of market growth on competitive forces (Hill and Jones 2001). As per this model, a market can be acknowledged as a growth industry as soon as demand for a particular good arises (Higgins 1989). In the fast-food industry, the baby boom populace hump tied with longer average life spans globally has been leading market growth (Reuters business 2002). A mature industry, where firms use their products as 'cash cows' to milk the profits, is one that has reached the peak of the industry life cycle model (Porter 1980). For the purpose of this paper McDonalds seems to take such an advantage by being mature in the fast-food industry. The firm has apparently gotten to what is called as the maturity stage and therefore it seems to revel in the profits that come together with that label. As expressed in the

focus group discussions, the strategies that the business follows are economies of scale and the market know-how they have in the industry, which allows them to reduce the price of their commodities. These results are also supported in the works of more researchers (see Dess et al. 2012, Khandelwal 2020). When it comes to Starbucks now, the company has fully grasped its maturity stage in North America, Australasia and Europe, and it is growing fast in the Middle East and Asia (Fromm 2014, Sanburn 2012). The in-depth interviews conducted with McDonalds and Starbucks personnel also confirmed this point. The would-be competitive advantages of McDonalds and Starbucks is discussed later in this paper.

However, for the moment the authors need to emphasize the fact that consumers of all ages today are becoming more discerning and active participants in their own health prospects and there is a tendency to turn away from a product if it lacks transparency (Panasara and Asnani 2022). As per a recent Forbes review, transparency is the principal trend driving change in the food and beverages industry today. Customers wish to know and apprehend what ingredients exist in the products they buy, which is why buyers are finding so many novel foods with tinier ingredient lists that a person can utter. Today consumers are looking for plainness together with better quality when it comes to food. In the previous years, it was occasional to flip to the back of a good on shelf and read it prior to buying the product. On the contrary the majority of buyers now are taking a look at the back of the package before taking the product to the cashier (Olayanju 2019). All these factors are relevant to consumer perceptions toward McDonalds' and Starbucks' products as they are parts of 'external dynamics' that the companies have to take in consideration and map them with 'internal dynamics' when planning for the future and are discussed below in the analysis of the two brands.

The Nature and Importance of Main Barriers

In this paper the authors question Porter's 5 forces model as being the proper method to investigate competition in the fast-food industry. For anyone who has studied the model, it is long ago suggested that its use enables companies to identify opportunities and threats in a company's microenvironment and act accordingly (Porter 1990). Porter's 5 forces model takes account of five competitive forces, the 'Rivalry among Existing Competitors', the 'Threat of Substitute Products and Services', the 'Threat of new Entrants', the 'Bargaining Power of Suppliers', and the 'Bargaining Power of Buyers' (Porter 1990). Rivalry, the first of Porter's 5 forces gazes at the sum and power of a company's rivals and tries to answer classical questions such as how many competitors are there in this firm's market or who are these opponents, and how do the features of their goods match with this company's products or services (Goyal 2020). For example, in a market where competition is fierce, research has found that firms appeal to buyers by antagonistically dropping prices and carrying high-impact promotional campaigns (Liu 2022). On the contrary, when competition is insignificant, and no other company produces what a given business produces, then this firm is likely to have

great competitor power, as well as strong revenues (Campbell et al. 1995). However, not much is said in the model how 'external dynamics', - especially the unpredictable elements -, that we introduced above, such as a flood or the degree and intensity of climate change may affect the rivalry and what a particular firm should do to survive, in our case McDonalds and Starbucks.

Similarly, the 'Threat of Substitute Products and Services' speaks of the possibility that a given company's clients may find another way of getting the service or product, or both, that this business offers (Liu 2022). For example, it is found, that if a business sells an inimitable software service that mechanizes an essential process, folks may substitute the business's service by performing the process manually or by subcontracting (McGee and Thomas 1992). Yet, the model does not say what happens in the case that the substitute product or service to which everybody has run fails to deliver again due to 'external dynamics', that is pre-determined or unpredictable elements, such as, for example, a sudden unavailability of a resource that is essential to make the substitute operational like grain shortage at present or a money market crack like the one in 2008.

Likewise, the 'Threat of New Entrants' determines how much the existing rivalry is threatened by companies trying to enter a specific market. Previous research has shown that if this is not costly and does not require a lot of effort to enter into the industry and compete successfully, or if the technologies which a given company uses are not supported enough, then new entrants can swiftly enter in this industry and challenge this company's position in that market (Goyal 2020). On the other hand, if a business has sturdy and tough barriers to entry, then this business may reserve a strong place in the market and take good benefit of it (Fuld 1987). Nevertheless, not much is said what happens if barriers to entry are impossible again due to 'external dynamics,' such as a new technology like artificial intelligence (AI) that threatens to change entirely the way humans communicate with a machine, or advances in, for example, pharma research that make the products of the existing rivalry obsolete and how this issue may be addressed by a specific firm.

Similarly, the classical strategic management literature tells us that the 'Bargaining Power of Suppliers' depends on how easy it is for a firm's contractors to raise their prices, and asked the following questions: How many likely suppliers is a firm having? How exclusive are the goods that a firm is offering? And how costly could be to shift from one supplier to a different supplier? (see Porter 1990). As per past research, the more suppliers a company has to select from, the easier it will be to shift to a low-cost substitute (Goyal 2020). On the contrary, the fewer contractors a business has and the more its business depends on them for assistance, the sturdier the supplier's place and their capability to make the business pay more is (Liu 2022). Research has found that such a change may have an effect on a firm's profitability, for instance, if the firm is driven to make costlier agreements or is forced by circumstances to leave the market (Ali and Ahmed 2023). Nonetheless, once more the model does not tell us precisely what happens in case supply becomes zero due to an embargo or a natural disaster, such as an earthquake, that is, again through changes in 'external dynamics' and how can the competition deal with the issue.

In a similar way, traditionally, if the number of buyers is less contrasted to a large number of existing competitors in a market, then buyers have what is known as ‘buyer power’ (Fuld 1987). This means that, habitually, a given company’s customers may find it easy to shift to new, inexpensive rivals, which can eventually drop down prices and a firm’s profitability (McNamee 1990). However, the model again does not seem to consider ‘external dynamics’, such as a sudden rise in interest rates which may affect consumer purchasing power. This being said, Porter’s 5 forces model is a useful tool to help the authors of this paper draw conclusions regarding the competition in the fast-food market in cases of market stability, but we have to keep in mind that it may not work in cases of unpredictable changes and future uncertainty as may be the case with the fast-food industry in different parts of the world.

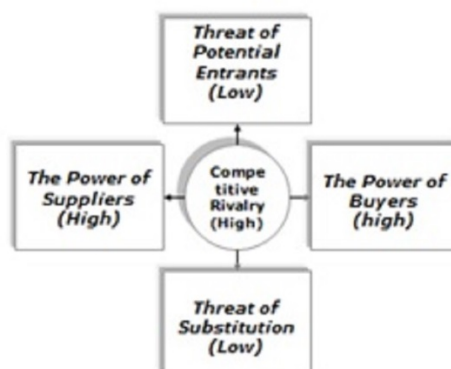
To take a closer look in the fast-food industry now, despite sturdy demand in the market, the marketplace seems to remain highly antagonistic (Ali and Ahmed 2023). Research also shows that the world of fast-food business has turned out to be competitive where there is a plethora of fast-food chains around (i.e., McDonalds, KFC, Starbucks, Costa, Pizza Hut, Subway, Burger King, Domino, etc.) as well as smaller independent fast-food outlets, expanding into new regions every day, advent of many new companies, fresh menus, and new kinds of gastronomies (Reshi et al. 2023). This is also confirmed in the focus group discussions with McDonalds and Starbucks personnel. Moreover, few features seem to contribute to the prosperity of fast-food restaurants and make them known globally as a preferred choice of dining. Those elements are local adaptation, customer-added values, innovative integrated marketing mix, quality services, and dining environment (see Nezakati et al. 2011) and these requirements were identified in the focus group sessions too. In fact, by looking at the expansion of this industry globally, one can see that despite local customer preferences, the rivalry maintains high (Ali and Ahmed 2023). This means that in spite of the ease for a new entrant to get in a local market for some time, in the international arena the main competitors are given – a number of them are already mentioned above, McDonalds and Starbucks are among them- and it may take years for a new entrant to expand in several countries or regions. This seemingly makes the threat of New Entrants low, which also confirmed with the representatives of the two companies in the in-depth interviews. When it comes to buyers now, the opposite thing appears to happen. Buyers, apparently, have tremendous power as they have many alternatives offering the choice of different cuisines and diverse tastes, such as American, Indian, Thai, Greek, Chinese, Arabic, Italian, Mexican, etc. (Etrata et al. 2023). And even in their choices of local cuisines, customers have more alternatives and more choices. This seems to make the power of buyers high in the fast-food market sectors both globally and locally (Nezakati 2003).

In contrast to the power of buyers, the threat of substitutes, as with new entrants, seems to be on the low side at both global and local markets as fast-food operators have timely customized their products as per local requirements and customs winning thus customers from more traditional restaurant shops, which could otherwise be substitutes (Ali and Ahmed 2023). In India for example, as stressed both in research (see Savant 2015) and in the focus group sessions, there

are several foods which are banned from consumption in many areas of the country as a result of religious, social, and cultural associations. Food and drink substances such as beef and alcohol are constrained from consumption by most Indians whereas at the same time wholly vegetarian towns exist like Amritsar and Rishikesh. Likewise, certain people who are following ‘ahimsa’ side-step from eating non-veg foodstuff. Moreover, a few others avoid onion and garlic in their dishes. All these practices created an opportunity for fast-food operators in the Indian market to customize their food offerings as per local dietary culture and preferences winning thus customers who otherwise would prefer to dine in a traditional restaurant or at home (Chitnis 2019). Moreover, similar practices are adopted by fast-food shops in other areas of the world. For example, in Israel and parts of the US where the Jewish population is dominant such as the New York Metropolitan Area and New Jersey, all of the McDonald’s shops have “kosher” written on them, to indicate that they only serve hamburgers there and not cheeseburgers as this goes against Jewish ‘Kosher’ dietary laws – for example as per ‘kosher’ laws a person cannot consume dairy products together with meat and one need to wait for at least 30 minutes to do so (Hirschman 1981).

When it comes to the “Bargaining Power of Suppliers” now, this was traditionally low as most of the fast-food chains had a choice of several different suppliers in a region and they had created their own supply chains (Ali and Ahmed 2023). However, at the time of writing this paper, this seems to be challenged due to grave economic/political factors (the Russian-Ukrainian war and the subsequent blockade to the supply of Ukrainian wheat, grains, and other products) - a change in ‘external dynamics’ - that are affecting the supply of wheat, grains, sunflower oils, and other food products globally and accordingly they cause a sharp rise in the price of commodities including food items (Ganeshan and Boone 2022). This last point was predominantly alarming for the participants of the focus group discussions. The above issues suggest that power seems to be concentrated to chief suppliers that have more access and stocks of food supplies than small peripheral players (Ganeshan and Boone 2022). The overall situation is depicted in Figure 1.

Figure 1. 5 Forces Analysis of the Fast-Food Industry



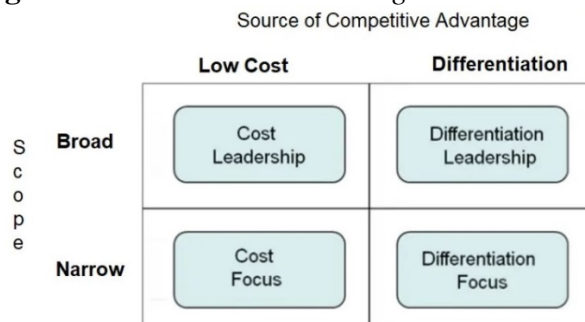
Source: Based on Porter (1979, p. 167).

This being said, it seems that the fast food industry is facing several challenges at present including fierce competition, diverse and changing dining habits, local cultures and changes in consumer preferences, rise in prices, supply shortages due to changes in ‘external dynamics’, and most of all the unpredictability of the future that makes any planning tremendously tough. Getting a sustainable competitive advantage in such an industry where unpredictable elements such as the degree and intensity of climate change, or the duration of the food supply shortage are at play and force fundamental changes in the markets, is a matter inviting the authors’ further investigation below.

The Relevance of Generic Strategies

Whether a company chooses to go with a cost leadership, differentiation or a focus strategy rests on market and buyer characteristics (Murray 1998). A focus strategy as defined as an approach in which a business chooses to operate in a niche market where it has more expertise and can be either a focus cost or a focus differentiation strategy (Porter 1979).

Figure 2. Porter’s Generic Strategies



Source: Porter (1979), p. 181.

Figure 2 shows the four kinds of generic strategies being Cost Leadership, Differentiation, Focus Cost, and Focus Differentiation. In the Cost Leadership and Differentiation strategies the scope is broad whereas in the Focus Cost and Focus Differentiation strategies the scope is narrow (Porter 1985). However, the barriers between these strategies are not clearly defined and a company may jump from one kind of strategy to another as the market conditions change (Porter 1990). This is particularly useful for the present study, because seemingly, the second of the chosen organizations, Starbucks, had initially adopted a focus differentiation strategy concentrating in the coffee and beverages sector of the fast food industry (Seafold et al. 2012). However, in 2005, and as competition, including McDonalds, started serving gourmet items at lower prices, Starbucks changed to a broad scope differentiation strategy by offering a variety of differentiated products, such as pastries, deserts, and lunch items too (Adamy 2008). Therefore, this makes Starbucks a good choice to investigate further as it demonstrates a purely broad scope differentiation strategy. This is so because, seemingly, the market size and the buyer characteristics express only one part of the corporation’s generic

strategy. As Lim writes the firm's competences also define if a given strategy is expected to be suitable (Lim 1993).

The above points suggest that a company must take account of its own core competences, such as marketing and supply chain capabilities, financial strength, research and development etc., to apprehend if these strengths are capable of supporting a certain strategy (Hill 1983). To go a step further, more recent research shows that conventional strategic planning methods such as Porter's Generic Strategies may not deal well with the unpredictability of the future and cultivating unique strengths (or core competencies) today will pay off tomorrow by giving businesses the tools to survive an uncertain future (Rodriguez-Villalobos and Garcia Martinez 2018, Kaur et al. 2014, Milestad et al. 2014, Banos et al. 2015). This seems to support the purpose of this study, which is to find out how taking advantage of McDonald's and Starbucks core competences at present (if any), and working to develop such competences, may strengthen the possibility of sustaining a competitive advantage in the years to come in the middle of constant change and the unpredictability of the future. The authors proceed to discuss this below.

Fast Food Industry and Cost Leadership Strategy (The Case of McDonalds)

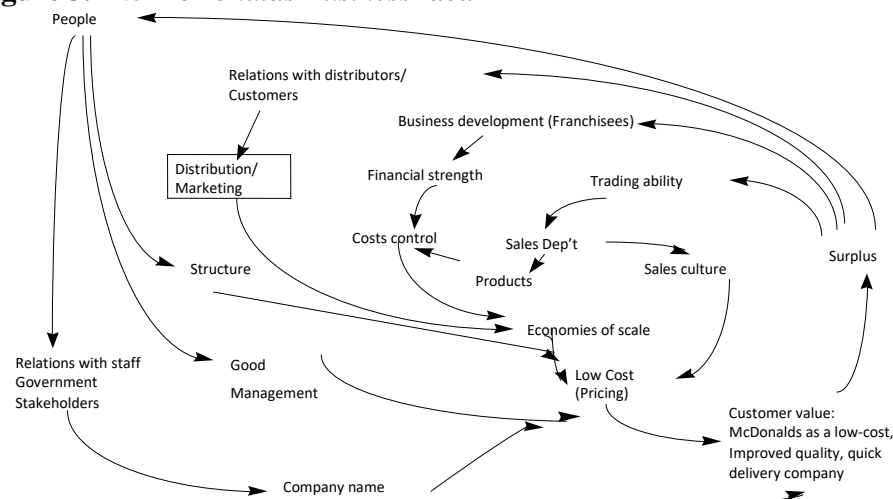
In a cost leadership strategy, the name of the game is keeping costs as low as possible, in effect, being the lowermost cost manufacturer in the market (Greckhamer and Gur 2019). Being a cost leader offers a business a competitive advantage over its competitors as the organization can make its goods available at a lower price (Armstrong 2022). That is to say, a low cost position works as a defence alongside rivals, because before competitors start a price war they have to consider that the company that offers the lowest price will still be in the best position to survive (Porter 1985). However, for a business to follow a cost leadership strategy, it has to be in a market in which economies of scale exist (Lim 1993). Economies of scale are defined as a reduction in the average costs of production as soon as there is a rise in the scale of production of a business. It refers to a condition when the number of production floods and the cost per unit drops (Bello et al. 2004). Economies of scale happen when there is a reduction of costs given a relative rise in production. This permits a company to offer its goods at more competitive prices and to seize a substantial market share (Armstrong 2022).

To understand this point better, one has to look at McDonalds that is focusing on every corner of the fast-food industry, having realized a bigger scale of operations and henceforth dropping the price tag in this market (Rodriguez-Villalobos and Garcia-Martinez 2018). This being said, it seems that McDonalds' low cost product strategy and several offerings make it a good choice for individuals that are on a budget, and for families and students. By selling an extensive array of products at highly reasonable charges, the brand has achieved to preserve an extensive buyer base that extents to diverse age groups and socio-economic background (Rodriguez-Villalobos and Garcia-Martinez 2018). Again this makes McDonalds an interesting case to analyse in this paper as it exemplifies a business that seemingly has adopted a broad scope cost leadership strategy. However,

whether or not this strategy may provide McDonalds a sustainable competitive advantage it is still a question, and the authors deal with this issue below. Furthermore, a company's skill to be a cost leader also rests on its ability to bring down costs through innovation (Young et al. 1989). In some organisations, this may be successful international operations due to which the research and development costs can be eliminated (Jones et al. 2012). Again, looking at McDonalds, the company's success till now seemed to hinge on its constant capability to increase production and drop down prices globally as well as diversifying product offerings and marginally improving product quality (Business Standard 2015). This point is also raised by McDonalds' Marketing and Sales managers during the focus group discussions.

How the above things happen is illustrated in the McDonalds' business idea diagram in Figure 3 that the authors of this paper have constructed with the contribution of McDonalds' personnel in the focus group workshops. A Business Idea diagram is a good method to illustrate how a company can use its resources and people to generate its core competence(s) that will help it effectively to get a competitive advantage in its market or markets (Prahalad and Hamel 1990). As illustrated in the McDonalds' Business Idea diagram below, the firm uses its surplus productively to invest in opening more shops globally, maintaining a well-supported supply chain management system and good relations with authorities everywhere, and keeping cost low due to economies of scale. These strengths coupled with excellent distribution and marketing capabilities, - which seems to be the core competence for McDonalds at present, - support the company's cost leadership strategy and permit it to retain its profits making it a low cost, improved quality, and fast delivery restaurant to its clients. McDonalds' core competence of '*Distribution / Marketing*' is placed inside the rectangle in the Business Idea diagram below. The above factors seemingly contribute to surplus which the business invests to retain its competencies.

Figure 3. The McDonalds Business Idea



What the reader sees in the McDonalds' Business Idea diagram above is a virtuous circle that goes from surplus to resources, competencies, strategies and

operations, and competitive advantage to link again to surplus though which the company seemingly uses its resources again to reinforce the process. Still, as expressed during the focus group discussions, the above does not seem to guarantee that McDonalds will keep having a competitive advantage for ever, as there are other significant issues that also come into play, such as managing critical activities, for example research and development, supply chain, and innovation. This requires McDonalds to master a capability to sense the periphery to learn and react from that angle and to learn to unlearn and to see things in a different way (see: Saxena 2016, Prahalad and Hamel 1990). Unlearning is vital for the reason that the ability to make new product groups or produce foremost chances in the market rests on seeing new patterns in the market (Brown 2004). To continue with our example, McDonalds then should, seemingly, have been more perceptive in its development of new and country/region customized offerings to make sure that all the supporting activities, mentioned above in its Business Idea diagram, work to achieving the same goal. This does not seem to be the case in several markets particularly in South Asia, Eastern Europe, and South America where McDonalds experiences losses (SEOAVes 2022). But in the rest of the marketplaces too, due to supply chain interruptions, dissatisfied franchisees, intense competition (i.e., Subway, Burger King etc.), unbalanced meals, employee dissatisfaction, and unhealthy food image (see SEOAVes 2022) - although the participants in the focus group discussions disagreed as to the intensity of these developments with the exception of unhealthy food image – McDonalds faces operational complications. Given these likely fallouts, this paper suggests that the firm needs to pay attention in retaining its *distribution / marketing* competence and try to improve its product image as well as retain its economies of scale, and turn them too to distinctive competencies. Otherwise, the authors of this work maintain that McDonalds, will, apparently, continue to deteriorate in customer choices and employee dissatisfaction, losing business, partners, and markets globally. This because a firm must be sure that its clients are highly price sensitive to the degree that they are eager to sacrifice a high degree of differentiation; if not, a cost leadership strategy is ineffective (Dierickx and Cool 2000). And, as this work has already stressed above, ‘transparency’ (which is the case of McDonalds seems to be specifically related to ‘unhealthy food image’), when it comes to product offerings is becoming more and more important for consumers in our times.

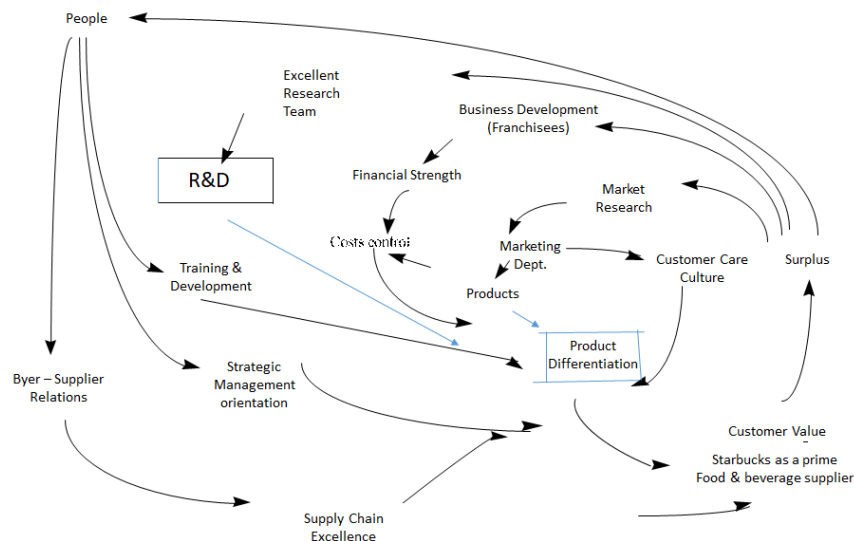
Fast Food Industry and Differentiation Strategy (The Case of Starbucks)

In a differentiation strategy, a company’s product or service has some characteristic observed by clients to be remarkable. This unique feature is what sets apart the product or service from rival goods (Porter 1990). Of course, offering a well-made high quality product is the outcome of excellent research and development. Even though the cost of this can be high, profits are believed to be higher (Hall and Andriani 2022). To apprehend this better, consider Starbucks, one of the top gourmet fast food businesses in the market, which seemingly embraces product differentiation as its chief strategy. As Colt writes the differentiation

strategy of managing to be a finest quality and exceptional coffee serving chain, has permitted Starbucks to attain a constant competitive advantage (Colt 2022). Using its plentiful research and development skills, allowed Starbucks to realize added uses for its current offerings or develop new tastes that denote considerable Research and Development (R&D) capabilities.

This being said, the authors of this paper deem that Starbucks' policy seems to have been constructed around two chief props: customer experience and quality. The company has amplified the apparent value of its product name by offering a seemingly inimitable, constant "Starbucks experience." (Manghat 2022). Consequently, clients are eager to pay a higher price for a mug of Starbucks coffee. Now, whether or not this policy has the potential to provide any future benefits to Starbucks in the form of a sustainable competitive advantage, it is interesting to investigate in the construction of its Business Idea below. Starbucks' Business Idea is, as with McDonalds' previously, drawn during the focus group discussions with the help of Starbucks' personnel. This business idea is illustrated in Figure 4. Based on its two core competences of 'Product Differentiation' and 'R&D' (competences are placed inside a rectangle in the business idea diagram), Starbucks seems to be able to obtain a competitive advantage through a product differentiation strategy. The surplus is used to further support its competences and other operations to grow resulting in more surplus making it thus a virtuous circle, as with the case of McDonalds before.

Figure 4. *The Starbucks Business Idea*

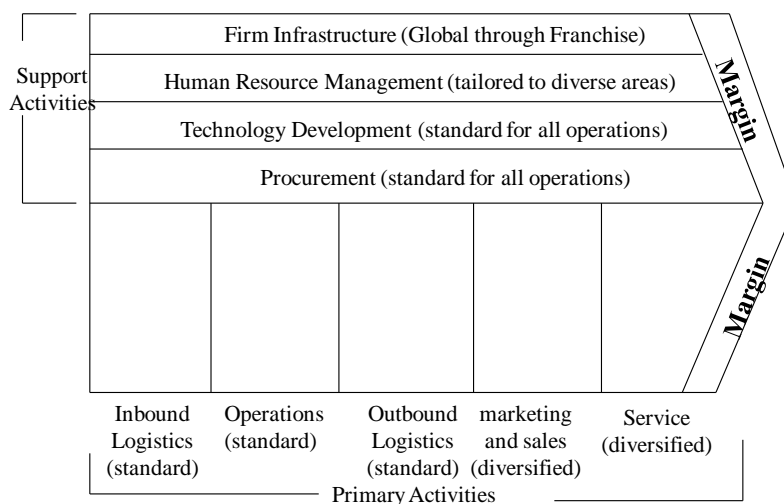


Nevertheless, there is a compromise concerning cost and differentiation and this seems to apply in the case of Starbucks too. Differentiated goods are habitually promoted at premium rates to deal with the added expenses of differentiation (Hill and Jones 2001). Together with high costs, the possible risk related to this strategy is that customers might not notice goods as differentiated (Andersen 2000). Therefore, the business should consider an incidental differentiation strategy due to its distinctive manner of including the client in the value chain (Ansoff 1988). The value chain model is an alternative way to assess company performance to the

traditional internal assessment model of a firm that is looking on how each individual department functions. The model was developed by Michael E. Porter in the 90ies but it seems that its origin goes back to the systemic view of the firm that looks companies as valuable activities based on how well they transform their inputs to outputs (Jackson 2003). The original idea of the 'systemic' model was developed by the ancient Greek philosopher and scientist Aristotle and is based on the scientific observation that *'the whole is greater than the sum of its parts'* (τὸ γὰρ ὅλον πρότερον ἀναγκαῖον εἶναι τοῦ μέρους – Ancient Greek (see Aristotle: Politics 1, 136)', which means that the sum of all of our activities produces something that is more than the outcome of each separate activity in itself, that can be how an organization achieves competitive advantage in the same way that a human being is more than the sum of its physical parts being a unique personality (Checkland 1981). This in Starbucks case is, presumably, product differentiation.

Porter's 'value chain' model is composed of nine activities that work together to buoyantly produce the excess value in an organization (Jackson 2000). Five of these activities are primary activities such as inbound logistics, operations, outbound logistics, marketing and sales, and customer service. Porter names them as primary because they are fundamental in order for a company to function (Porter 1985). The remaining four are support activities such as Firm infrastructure, Procurement, Human Resource Management, and Technology Development. The support activities are there to support all primary activities to function normally (Porter 1985). The outcome of all the value activities is called 'margin', and denotes the value added to the organization by carrying on successfully all the value activities (Jackson 2000). The idea apparently takes after Aristotle's definition of the *systemic* model (in other words, the organization can be looked on as a system composed of numerous different parts), that this paper dealt with above.

Figure 5. *The Starbucks Value Chain*



Source: Porter (1985), p. 98.

Figure 5 shows the suggestive value chain for Starbucks constructed by the authors of this paper taking into consideration the reflexions of Starbucks personnel in the in-depth interviews and the focus group discussions. When it comes to the performance of primary activities while Inbound Logistics, Operations, and Outbound Logistics are standard for all markets and deliver high quality organized services, Marketing and Sales, and Service are tailored to different markets as per local ethics, and social and dietary customs. This means that in order to sustain any competitive advantage, Starbucks will have to continually monitor local factors otherwise the product offers will vary in quality as well as Starbucks will face the challenge to cope with changes in demand in different countries and regions. This being the case, studies show that Starbucks has problems in marketing its product line successfully to young consumers in several parts of the world including South Asia, East Asia, and Europe resulting to reduced profitability (Linn 2007). For example, in India only, the firm had recounted a loss of INR 133.5 crore (16,337,169 US\$) in Financial Year 2021 and INR 102.7 crore (12,567,224 US\$) in Financial Year 2020 (Manghat 2022). When it comes to support activities now, while Technology Development and Procurement are standard and well organized for all markets, Firm Infrastructure and Human Resource Development depend on how are local facilities managed and how well franchisees train their personnel in different countries and areas as well as how satisfied such employees are with the mother company. Again, studies illustrate that Starbucks employees in several parts of the world including North America have been utterly dissatisfied with their jobs at Starbucks due to absence of promotion opportunities, long work hours, and relatively low salaries, which resulted in low performance, absenteeism, turnover, and a drop in productivity (Stelter 2008). Employee dissatisfaction with long-hours was conversed during the in-depth interviews too, where the participants had the choice to express themselves freely. Also the quality of facilities in Starbucks varies from place to place (Stelter 2008). The above issues suggest that any long term competitive advantage for Starbucks is questionable as this will depend upon how well the company will deal with improvements in the above areas and more core competences should be sought in the areas of HRM and Firm Infrastructure to sustain any would-be competitive advantage in the future.

Perceived Threats

A competitive advantage only points to better than average performance if it is sustainable (Lim 1993). Businesses missing to sustain such a plus, the sooner or later will turn out to be susceptible to losses (see Lauritzen and Karafyllia 2019) as it is seen with Starbucks above. One can understand this by looking more closely at the strategies of McDonalds and Starbucks. Even though the policies of those firms centre on dissimilar viewpoints, the analysis above has shown that both are facing threats as their competitive advantage over rivals does not seem to be fully sustained. Although the business ideas of both companies show that both have some advantage over the competition by having developed a small number of strengths more core competences are required. Here one should try to explain why

this may occur. First of all, both McDonalds and Starbucks share alike challenges such as an increase in population globally as well as bigger consumer awareness on product and/or service transparency. And both profit from releasing constraints on pointing to consumer advertising, which permits both of them to market food and beverages items as never before imagined (Kahndelwal 2020). For how long this will continue to happen, will depend upon learning to unlearn and adjust their product offerings,

Even so, as this study shows, it has been hard for either of these businesses to sustain a competitive advantage for a long time, and it is even more doubtful in the future given the total unpredictability of tomorrow. This means that imitations from rivals may be a major concern for both companies in the future. From the discussion above, it seems that both McDonalds and Starbucks cannot do much to escape it at least for the close future. In the case of McDonalds, it has been argued that the company cannot benefit for long from low cost as local competitors continually improve their offerings (Kahndelwal 2020). This was a matter raised in the in-depth interviews and argued in the focus groups discussions in this study too, and the participants expressed some worries at least for India. The participants were concerned of what happens if new entrants overcome the entry barriers due to product imitations as the Indian market is price sensitive, enter into the industry and steal McDonalds of their customers, presenting thus an additional threat to the company. For Starbucks now, as client's income and tastes may change over time, customers may not be willing to pay the premium price as easily as they do at the present time that may wipe out the firm's existing competitive advantage. Moreover, mapping 'internal dynamics' with 'external dynamics', is another issue that both these companies should consider, and to do so they both need to ponder on how changes in environmental variables in an uncertain future may challenge their would-be distinctive competences and shake their operations, and to plan accordingly.

Conclusion

Competitive strategic choice can be stirred by two things. One is the market attractiveness, and the other is the comparative position of the rivals in the market (Jackson 2000). Normally, the fast-food market remained strong due to high barriers to competition (Manghat 2022). Nevertheless, the results of the above analyses show that, with reference to McDonalds and Starbucks, the fast-food market today seems to face increasing threats from all five competitive forces. Both suppliers and buyers are getting sturdier, and the grade of intra – industry competition is increasing as generic players increase and research output falls.

This paper aimed to close the research gap of whether or not the use and outcomes of Porter's Generic Strategies model apply to all situations and cases. By conducting in-depth interviews with McDonalds and Starbucks personnel and subsequent focus group discussions, and working with certain analyses such as the 'Business Idea' model, the value chain, and industry analysis, the authors of this paper were able to identify that to sustain competitive advantage in the specific

businesses is not enough to embrace Porter's generic strategy model. The study of Starbucks and McDonalds 'business ideas' above show that developing a core competence philosophy and linking internal to external dynamics is an urgent requirement, otherwise both companies would continue to lose markets and customers. Moreover, as the above analysis shows, this may not work too without coordination of all the parts of the 'system' in these organizations. By the word 'system', as suggested by the analysis above, the authors mean that the individual business activities in both firms need to be fully integrated to form a 'whole', which will in turn guarantee linking activities to value outcomes (see Checkland and Scholes 1999). Additionally, as this study shows, the development of more competencies seems to govern whether Porter's generic strategies are expected to be successful in the particular cases. Starbucks' strategic focus on gourmet products and McDonalds' strategy of economies of scale, undoubtedly, have provided the companies with some advantages until now. However, the challenge for both is to sustain this advantage. The authors consider that it is vital for both the firms first to learn how to unlearn, and come up with fresh ideas, and then to work on creating new distinctive capabilities, and put them to work to address external macro-environmental challenges. This because in both of these firms the uncertainty of the future impends to take away any gains that they have enjoyed until today. By analogy, this study would suggest that this may occur to any business that fails to reflect on long term sustainability of competitive advantage, being in the fast-food, or in any other market. However, this is the issue of further research and the writers hope that the results of this study will encourage more research in the area. To conclude, as research has shown, several firms appear to pursue a generic strategy successfully (see El Namaki 2016, Hodgkinson and Wright 2002, Mackay and McKiernan 2006), but in the cases of McDonalds and Starbucks studied above, both the firms seem to have ended up by being stuck in the middle.

References

- Adamy J (2008, January 7) McDonald's takes on a weakened Starbucks. *The Wall Street Journal*, A1. Available at: <https://www.wsj.com/articles/SB119967000012871311>.
- Ali R, Ahmed RR (2023) Empirical Study of Globalization on Global Brands of the Fast-Food Industry to Increase Consumer Purchase Intention. *Transformations in Business and Economics* 22(58): 21–50.
- Alon L, Baruch AF, Nachmais R (2020) Towards a Typology of Personal Information Management Behavior: Exploring and Defining People's Interactions with Personal Information. *Aslib Journal of Information Management* 72(6): 156–172.
- Andersen TJ (2000) Strategic planning, autonomous actions and corporate performance. *Long Range Planning* 33(2): 184–200.
- Ansoff HI (1988) *The New Corporate Strategy*. New York: Wiley.
- Aristotle: *Politics* 1, 136: 1252b27-1253a39. Available in Greek at: https://www.greek-language.gr/digitalResources/ancient_greek/anthology/literature/browse.html?text_id=324.
- Armstrong P (2022) The Costs of Activity-Based Management. *Accounting, Organizations and Society* 27(1–2): 99–120.

- Banos A, Lang C, Marilleau N (2015) *Agent-based Spatial Simulation with Netlogo*. ISTE Press – Elsevier.
- Bello CD, Lohtia R, Sangtani L (2004) An institutional analysis of supply chain innovations in global marketing channels. *Industrial Marketing Management* 33(1): 57–64.
- Brown JS (2004) Minding and Mining the Periphery. *Long Range Planning* 37(2):143–151.
- Business Standard (2015, April 20) *McDonald's to open 100 outlets of McCafe in India*. Available at: https://www.business-standard.com/article/companies/mcdonalds-to-open-100-outlets-of-mccafe-in-india-115042000958_1.html.
- Campbell A, Goold M, Alexander M (1995) Corporate Strategy: The Quest for Parenting Advantage. *Harvard Business Review* (Mar-Apr): 1995.
- Checkland PB (1981) *Systems Thinking, Systems Practice*. Chichester: John Wiley & Sons.
- Checkland P, Schole J (1999) *30 Years Retrospective: Soft Systems Methodology in Action*. Chichester: John Wiley & Sons.
- Chia R (2008) Enhancing entrepreneurial learning through peripheral vision. In R Harrison, C Leitch (eds.), *Entrepreneurial Learning: Conceptual Frameworks and Applications*, 27–43. London: Routledge.
- Chitnis SP (2019) A Study on Scenario of Fast-Food Industry in India. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, Conference Issue, 88–90.
- Colt G (2022, September 9) *Sustained Competitive Advantage of Starbucks*. ToughNickel.
- Dess GG, Lumpkin GT, Eisner AB, McNamara G (2012) *Strategic management: Text and cases*. 6th Edition. New York: McGraw-Hill Irwin.
- Dierickx I, Cool K (2000) Rivalry, Strategic Groups, and Firm Profitability. *Strategic Management Journal* 14(2000): 47–59.
- Eden C, Ackermann F (1998) *Making Strategy: the journey of strategic management*. London: SAGE Publications Ltd.
- El-Namaki SSM (2016) From Competitive Advantage to Cross-Country Dynamic Synergy. *The International Journal of Management* 3(4): 1–7.
- Etrata AJr, Magbanua CR, Olfato TMG, Redota ACMN (2023) Fast Food Industry: Brand Association and Perceived Quality Influence on Purchase Intention of Millennial Consumers. *Management and Economics Journal* 17(1): 1736–1749.
- Fromm J (2014) *Why Starbucks is Still Number One with Millennials*. Millennial Marketing.
- Fuld LM (1987) *Competitor Intelligence*. New York: Wiley.
- Fuller T, Loogma K (2009) Constructing futures: a social constructionist perspective on foresight methodology. *Futures* 41(2): 71–79.
- Ganeshan R, Boone T (2022, April 26) *How the war in Ukraine impacts global supply chains*. Available at: <https://www.ips-journal.eu/topics/economy-and-ecology/how-the-war-in-ukraine-impacts-global-supply-chains-5894/#:~:text=The%20war%20has%20strained%20global,mitigate%20disruptions%20and%20increase%20resilience&text=The%20Russian%20invasion%20of%20Ukraine,led%20to%20extensive%20economic%20impacts>.
- Goyal A (2020) A Critical Analysis of Porter's 5 Forces Model of Competitive Advantage. *Journal of Emerging Technologies and Innovative Research (JETIR)* 7(7): 149–152.
- Greckhamer T, Gur FA (2019) Disentangling Combinations and Contingencies of Generic Strategies: A Set-Theoretic Configurational Approach. *Long Range Planning* 54(2): 101951.
- Hall R, Andriani P (2022) Managing Knowledge for Innovation. *Long Range Planning* 35(1): 29–48.

- Harding J (2018) *Qualitative Data Analysis*. 2nd Edition. SAGE Publications.
- Henderson B (1970) *The Product Portfolio: What is the Growth Share Matrix*. Boston Consulting Group.
- Higgins KT (1989, September 25) Category Management: New Tools Changing Life for Manufacturers, Retailers. In *Marketing News*, 2–19. Available at: <https://www.retaildogma.com/category-management/>.
- Hill CWL (1983) Differentiation Versus Low Cost or Differentiation and Low cost: A contingency Framework. *Academy of Management Journal* 3(13): 12–26.
- Hill CWL, Jones GR (2001) *Strategic Management Theory, An Integrated Approach*. 5th Edition. NY: Houghton Mifflin Company.
- Hirschman EC (1981) American Jewish ethnicity: its relationship to some selected aspects of consumer behaviour. *Journal of Marketing Management* 45: 102–110.
- Hodgkinson GP, Wright G (2002) Confronting strategic inertia in a top management team: learning from failure. *Organization Studies* 23: 949–977.
- Hodgkinson GP, Healey MP (2008) Toward a (pragmatic) science of strategic intervention: design propositions for scenario planning. *Organization Studies* 29(3): 435–457.
- Jackson MC (2000) *Systems Approaches to Management*. NY: Kluwer/Plenum.
- Jackson MC (2003) *Systems Thinking: Creative Holism for Managers*. Chichester: John Wiley & Sons Ltd.
- Johnson MK, Sherman SJ (1990) Constructing and reconstructing the past and the future in the present. In ET Higgins, RM Sorrentino (eds.), *Handbook of Motivation and Cognition: Foundations of Social Behaviour (II)*, 482–526. NY: The Guildford Press.
- Jones SC, Knotts TL, Udell GG (2012) How Product Development Influences Product Evaluation. *International Journal of Marketing and Technology (IJMT)* 2(4): 54–71.
- Kaur K, Sharma N, Kapoor S (2014) Banking Industry: Indian Scenario. *International Journal of Business Management* 1(1): 8–16.
- Khandelwal R (2020, November 20) *Must-Know: McDonald's Has Got Tough Competition*. Market Realist.
- Lauritzen GD, Karafyllia M (2019) Perspective: Leveraging Open Innovation through Paradox. *Journal of Product Innovation Management* 36(1): 107–121.
- Lim GE (1993) Evolving Concepts of Organizational Leadership. *Singapore Management Review* 2(15): 28–39.
- Linn A (2007, September 10). *Starbucks rethinks stance on young consumers*. MSNBC.
- Liu Y (2022) A Review of the Basic Theory of the Great Michael Porter's Positioning School. In X Li, C Yuan, J Kent (eds.), *Proceedings of the 5th International Conference on Economic Management and Green Development*. Applied Economics and Policy Studies. Singapore: Springer.
- Mackay RB, McKiernan P (2006) Back to the future: history and the diagnosis of environmental context. *International Studies of Management and Organisation* 36(3): 93–109.
- Manghat S (2022, September 2) *How Starbucks Is Performing in India*. Bloomberg BQ Prime.
- Manzano A (2022) Conducting focus groups in realist evaluation. *Evaluation* 28(4): 406–425.
- McGee J, Thomas H (1992) Strategic Groups and Intra-Industry Competition. In DE Hussey (ed.), *International Review of Strategic Management*, 3. Chichester: Wiley.
- McGrath RG (2013) *The end of competitive advantage: How to keep your strategy moving as fast as your business*. Harvard Business Review Press.
- McNamee P (1990) The Group Competitive Intensity Map: A Means of Displaying Competitive Position. In DE Hussey (ed.), *International Review of Strategic Management*, 1. Chichester: Wiley.

- Milestad R, Svenfelt A, Dreborg KH (2014) Developing Integrated Explorative and Normative Scenarios: The Case of Future Land Use in a Climate-Neutral Sweden. *Futures* 60: 59–71.
- Murray A (1998) A contingency view of Porter's generic strategies. *Academy of Management Journal* 13: 390–400.
- Nezakati H (2003) Evaluating the Theory of Diffusion of Innovations in Respect to Consumers' Time of Adoption (Electronic Industry). *Journal of Economics Management* 16(67): 145–168.
- Nezakati H, Azman Ali N, Mansori S, Noghondari AT (2011) Adoption and Diffusion of Innovations in Fast Food Industries. *Australian Journal of Basic and Applied Sciences* 5(12): 833–839.
- Olayanju JP (2019, February 16) *Top Trends Driving Change in the Food Industry*. Forbeswomen.
- Panasara U, Asnani B (2022) Consumer Awareness on their Rights and Responsibilities: An Exploration Analysis from Gujarat. *Guj. J. Ext. Edu. Special Issue*, 121-126.
- Porter ME (1979) How Competitive Forces Shape Strategy. *Harvard Business Review* (Mar-Apr).
- Porter ME (1980) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. NY: The Free Press.
- Porter ME (1985) *Competitive Advantage: Creating and sustaining superior performance*. NY: The Free Press.
- Porter ME (1990) *The Competitive Advantage of Nations*. NY: The Free Press.
- Prahalad CK, Hamel G (1990) The Core Competence of the Corporation. *Harvard Business Review* (May-Jun).
- Reshi IA, Dar SA, Ansar SS (2023) An Empirical Study on the Factors Affecting Consumer Behavior in the Fast-Food Industry. *Journal of Accounting Research, Utility Finance and Digital Assets* 1(4): 376–381.
- Reuter's business (2002, November 22) *The marketplace in the 21st century*. Available at: www.reutersbusinessinsight.com.
- Rodriguez-Villalobos M, Garcia-Martinez JG (2018) Economies of Scale and Minimization of the Cost: Evidence from a Manufacturing Company. *Journal of Eastern Europe Research in Business and Economics* 2018: 128823.
- Sanburn J (2012, December 14) *Do We Really Need 1,500 More Starbucks?* Available at: <http://business.time.com/2012/12/14/do-we-really-need-1500-more-starbucks/>.
- Santos J, Spector B, van der Heyden L (2009) *Towards a Theory of Business Model Innovation within Incumbent Firms*. Working paper, INSEAD and Northeastern University, 4–53. Available at https://flora.insead.edu/fichiersti_wp/inseadwp2009/2009-16.pdf.
- Sarpong D, Amankwah-Amoah J (2016) Scenario planning: Methodologies, methods and shifting conceptual landscape. *International Journal of Foresight and Innovation Policy* 10(2/3/4): 76–89.
- Savant P (2015, March 12) *Foods banned in different parts of India*. The Times of India.
- Saxena S (2016) Innovation Research and Managerial Implications: The Need to Learn, Unlearn and Re-Learn for Organizations. *Oman Chapter of Arabian Journal of Business and Management Review* 5(8): 13–29.
- Schwab K (2017) *The Fourth Industrial Revolution*. NY: Crown Business.
- Schwartz P (1991) *The Art of the Long View*. NY: Doubleday Currency.
- Seafold B, Culp R, Brooks BW (2012) Starbucks: Maintaining a Clear Position. *Journal of the International Academy for Case Studies* 18(3): 39–55.
- SEOaves (2022, February 27) *McDonald's SWOT Analysis*. Available at: <https://seoaves.com/mcdonalds-swot-analysis/>.

- Statista (2023) *Brand value of the 10 most valuable quick service restaurant brands worldwide in 2022*. Available at: <https://www.statista.com/statistics/273057/value-of-the-most-valuable-fast-food-brands-worldwide/>.
- Stelter B (2008, April 24) *Pressed by the economy, Starbucks lowers its forecast*. New York Times, 7.
- van der Heijden K (2005) *Scenarios, the Art of Strategic Conversation*. 2nd Edition. Chichester: John Wiley & Sons.
- Van der Heijden K, Bradfield R, Burt G, Cairns G, Wright G (2002) *The Sixth Sense: Accelerating Organizational Learning with Scenarios*. Chichester: John Wiley & Sons.
- van der Heijden K, Bradfield R, Burt G, Cairns G, Wright G (2005) The origins and evolution of scenario techniques in long range business. *Futures* 37(8): 795–812.
- Volberda HW, Khanagha S, Baden-Fuller C, Mihalache OR, Birkinshaw J (2021) Strategizing in a digital world: Overcoming cognitive barriers, reconfiguring routines and introducing new organizational forms. *Long Range Planning* (May): 22–43.
- Wright G, Goodwin P (1999) Future-focussed thinking: combining scenario planning with decision analysis. *Journal of Multi-Criteria Decision Analysis* 8(6): 311–321.
- Young S, Hamill J, Wheeler C, Davies JR (1989) *International Market Entry and Development: Strategies and Management*. NY: Prentice Hall.

Business Company Approaches to the Protection of Nature and Biodiversity

By Peter Jones*

The conservation and protection of nature is attracting increasing attention in the business world, and this reflects the growing explicit corporate recognition that many businesses depend on nature and natural resources. However, business company initiatives to protect nature and biodiversity have received very limited attention in the business and management literature, and this represents a gap in that literature. With this in mind, this paper looks to explore and illustrate, why, and how, a number of major companies have publicly claimed to be protecting nature and biodiversity. The paper identifies five themes, namely an ambitious approach, a business led rationale, forest regeneration, collaborative endeavours, and a focus on the supply chain, which collectively capture the companies' approach to protecting nature and biodiversity. The author also argued that a number of wider issues were important in exploring the role of businesses in protecting and restoring nature and biodiversity.

Keywords: *business; nature; biodiversity; nature positive; sustainability*

Introduction

The conservation and protection of nature is attracting increasing attention in the business world. McKinsey and Company (2023), for example, argued that 'global companies are paying more attention to nature and natural capital', while S&P Global (2022), acknowledged that protecting biodiversity was 'capturing more attention in the corporate world.' Taking an academic perspective, Krause et al. (2020), claimed that 'while climate change has been a comparatively prominent topic for some time, issues around biodiversity protection and nature conservation are starting to gain attention from the global business community as well.'

In part the growing business interest in, and commitment to, nature and biodiversity protection, can be seen to reflect the growing explicit corporate recognition that many businesses depend on nature and natural resources, though Hahn and Tampe (2020) acknowledged that many 'business activities rely on functioning social-ecological systems but tend to take these for granted.' In a similar vein, S&P Global (2022), argued that 'businesses have long harnessed nature's resources without having to pay a full price for the privilege', that 'there is now a growing realization that the real-world cost of exploited natural capital — everything from bees and fish stocks to the carbon-storing capacity of trees — ought to be properly tallied on corporate balance sheets', and that 'such an accounting could spur companies to make and sell goods and services in a way

*Emeritus Professor, School of Business, University of Gloucestershire, UK.

that causes no net loss of natural capital or, better yet, yields a gain — thus helping to restore a small part of the natural world.' In part, the increasing corporate interest in protecting biodiversity also reflects growing and widespread concerns about the global nature crisis, which has seen the planet '*experiencing a dangerous decline in nature*', in which '*one million species are threatened with extinction, soils are turning infertile, and water sources are drying up*' (United Nations Environment Programme 2023).

However, specific commitments and initiatives pursued by business companies to protect nature and biodiversity have received very limited attention in the business and management literature, and this represents a gap in that literature. With this in mind, the objective of this exploratory paper is to explore, and illustrate, why and how, a number of major companies have publicly claimed to be protecting nature and biodiversity, and as such to contribute to helping to fill this gap in the literature. The paper includes a personal summary of the changing relationship between businesses and nature, a brief literature review, an outline of the frame of reference and method of enquiry, an exploratory review of a number of large companies' reported commitments and initiatives to protect nature and biodiversity, some reflections on these commitments, and a brief conclusion.

The Changing Relationship between Businesses and Nature

The relationship between people and nature has changed over time. Looking back into history, there is a broad consensus, that for a long period of time, human beings predominantly lived in harmony with nature. Here, a hunting and gathering culture, which relied on hunting, fishing and foraging wild vegetation, saw human beings as very much an integral part of the natural world in which they lived. With the gradual emergence of sedentary agriculture, the domestication of plants and animals, and permanent settlement, nature provided a sufficiently rich and reliable variety of food and resources at fixed locations. Over time agriculture's relationship with nature evolved, and human agency became increasingly active, epitomised, for example, by the clearance of natural woodlands and forest, with the land being turned over to grazing for sheep and cattle.

However, it was the origins, and spread of the so-called Industrial Revolution, from the late eighteenth century onwards, that brought about dramatic changes in the relationship between people and nature. On the one hand industrialisation has seen the exploitation of a seemingly ever wider range of the earth's natural resources, including timber, coal, oil, gas, mineral ores, and water. On the other hand, industrialisation has also often brought a number of damaging environmental consequences, including air and water pollution, increases in carbon dioxide and greenhouse gas emissions, the depletion of ozone levels in the atmosphere, and the loss of biodiversity. All these changes served to increasingly sever the once harmonic relationship between people and nature, and led to the dysfunction and destruction of a growing number of ecological systems.

Individual, and often isolated, fears about the damage people and industries were inflicting upon nature and the natural environment have a long pedigree, but

during the last half century or so, the majority of concerns about nature, and its conservation have crystallised around the environmental movement. Rachel Carson's (1962) book *Silent Spring* is often cited as the spark for the movement, that now embraces sustainable development, the United Nations Sustainable Development Goals, the climate movement, and the Global Biodiversity Framework. More recently, the concept of nature positive, where nature is being restored and is regenerating, rather than declining, has attracted prominence as a result of widespread recognition of the global scale at which nature is being lost, the threat this poses to the collective survival of the human race, and the urgent need not only to conserve, but also to restore, nature.

Literature Review

The role of business in protecting nature and biodiversity has received limited attention in the business and management literature though a number of themes can be identified. In looking to stimulate business research into the protection of biodiversity, Panwar et al. (2022) recognised that while there was growing academic interest in understanding and enhancing corporate engagement in protecting biodiversity, this research had a narrow focus on corporate sustainability. The paper looked to facilitate future research on corporate biodiversity protection strategies. Here the argument was that there are multiple pathways to biodiversity loss, and that this, in turn, raises questions about the reasons for an apparent lack of attention to biodiversity in the business community outside the highly visible industries such as food, forestry and mining. In conclusion, Panwar et al. (2022) emphasised not only that global targets set by governments cannot be achieved without the full engagement of the private sector, but they also suggested that their work would inspire researchers to examine how companies can enhance, rather than destroy, biodiversity.

Wagner (2022) analysed corporate action to support biodiversity and ecosystem services by a wide range of manufacturing companies in Germany. This analysis was premised on the recognition that businesses rely on resources sourced from nature, that their operations were also a major contributor to biodiversity loss, and the paper focused directly on activities directly designed to protect biodiversity and ecosystem services, rather than on wider environmental protection activities. The findings revealed tensions between risk perception and activities pursued for the protection of biodiversity, not least because companies shied away from substantive action. The findings also revealed that small and medium sized firms are less active in focusing on nature and biodiversity, and that their environmental management systems are not conducive to corporate activities to support biodiversity and ecosystem services.

In recognising that businesses now regularly face calls to contribute to the protection of biodiversity and natural capital, Fegger and Mermet (2022) presented the results of an action research project with a major French company in the environmental sector that had been experimenting with innovative services dedicated to ecosystem management. More specifically, the authors introduced a

new theoretical framework, centred on the development of four business models for ecosystem management services. These models, defined by the centrality they gave to measurable diversity performances, looked to combine corporate value creation with ecological value at the ecosystem level. Looking to future research Fegger and Mermet (2022) suggested that the development of ecological accounting innovations will be vital in working with client companies who expect, and pay for, measurable results in the improvement of biodiversity and natural capital.

Prue et al. (2020) recognised that companies are beginning to look for ways to assess their biodiversity performance, but suggested that, to date, the focus has been on developing indicators for specific business contexts. However, the authors claimed that many of these indicators are not widely transferable across different contexts, which makes it difficult for many businesses to manage their biodiversity performance. More positively, Prue et al. (2020) proposed a framework to support the more comprehensive development of quantitative biodiversity indicators for a range of business contexts, and the authors illustrated how the framework offers a pathway for businesses to assess their biodiversity performance by mitigating their biodiversity impacts, thus enabling them to demonstrate their contribution to global biodiversity targets.

Krause et al. (2020) applied a structural equation model, based on the theory of planned behaviour, to analyse how over 600 German companies might increase corporate action for conservation. Their findings revealed that a favourable attitude, driven by perceived business relevance and benefit prospects, fostered engagement, while perceived difficulties, notably a lack of finance and knowledge, hindered engagement. The authors also found that while customers, employees, and the general public were the only stakeholder groups driving corporate conservation expectations, the expectation levels of virtually all stakeholders were found to be low and certainly inadequate for the current ecological crisis. Looking more positively to the future, Krause et al. (2020) discussed how political will and goal setting can encourage greater business support for conservation and protection of nature.

Roberts et al. (2022) examined the intersections between biodiversity and the circular economy, arguing that both were crucial for the future of sustainable development, and focused on companies reporting practices on both the introduction of the circular economy and the corrective actions taken to repair biodiversity using a new disclosures index. Data was collected from some 28 companies in the defence, motor vehicle and transport sectors, over four years. The overall scoring of disclosures was low, indicating that the majority of companies had a lack of knowledge of biodiversity and of the circular economy. The authors claimed that the paper had practical implications to help policy makers to provide guidelines to regulators about the importance of creating awareness of biodiversity and extinction accounting among the business community.

Kennedy et al. (2022) recognised that measuring biodiversity impact was attracting corporate attention as companies faced increasing scrutiny over the mass extinction of animals, but that many current approaches were seen to be in their

infancy, and did not address the dynamic complexity that can bring about sudden ecosystem change. The authors argued that corporate biodiversity impact measurement could be advanced by incorporating resilience thinking from the natural sciences, in that such an approach could refocus measurement on how biodiversity contributes to an ecosystem's capacity to adapt to disturbances and avoid abrupt transformative change. More specifically, Kennedy et al. (2022) put forward seven key mechanisms that they suggested could inform the development of measurements across three biodiversity attributes, namely abundance, composition, and distribution.

A number of specific issues, which are relevant to business and nature can be identified within this brief literature review. These issues include the belief that targets on halting biodiversity loss cannot be achieved without the full engagement of the private sector; the need for researchers to examine how companies can enhance, rather than destroy biodiversity; a view that large companies, are likely to be more active, in protecting nature, than their small and medium sized counterparts; the relevance of protecting nature to specific businesses; the value of setting goals; the role of the circular economy; and the importance of metrics and measurement.

Frame of Reference and Method of Enquiry

In looking to explore why, and how, major business companies have claimed to be protecting nature and biodiversity, the author adopted what might best be described as a simple opportunistic approach. More specifically, a preliminary search on Google, using the terms, businesses companies and protecting nature, simply drawn from the research objectives of the paper, as key terms, revealed that Broderick (2023), writing under the banner of the Ramboll Consultancy, identified 15 businesses, namely, the Nature Conservancy, Google, Unilever, Danone, GSK, Kering, Coca Cola, Nike, Ben and Jerry's, Ikea, Johnson and Johnson, PepsiCo, The Body Shop, Walmart and Boeing, that were described as '*leading the way on biodiversity*.' However, the Nature Conservancy is a not for profit organisation, and as the focus was to be on business companies, it was excluded.

The author conducted a series of Internet searches, using nature and biodiversity protection, and the names of the selected 14 selected business companies, as key terms, on Google in December 2023. The use of simple key terms and the companies' names seemed appropriate in an exploratory paper. This search revealed that though all 14 companies provided some information on their environmental policies, only 8 of them, namely, Danone, Google, Ikea, Johnson and Johnson, Kering, PepsiCo, Unilever, and Walmart posted specific information on their approach to protecting nature and biodiversity. Brief pen pictures of these companies are provided at the end of this section of the paper.

This information provided the source material for this paper. This information was well clearly signposted, and the author took the considered view that a detailed content analysis would be unnecessary in an exploratory study. Rather, a close reading of the source material was undertaken and a number of major themes were identified. As the information was in the public domain, on the

selected companies' websites, the author felt that it was not necessary to seek formal permission to use them. At times, the author explicitly quotes from the selected companies' websites, and here the aim is to add authenticity to the narrative by exploring how the selected clothing retailers publicly expressed, and looked to evidence, their approaches to sustainability, in their own words.

Danone is a French multinational food company founded in 1919. The company specialises in nutritional supplements, both dairy and dairy-free products, coffee and bottled water. Google is a US multinational technology company, founded in 1989, and focused on artificial intelligence, online advertising, search engine technology, and computing, and it employs some 140,000 people. Ikea is a Swedish multinational company, founded in 1943, it designs and sells self-assembly furniture, kitchen appliance and home accessories, and trades from over 400 retail outlets. Johnson and Johnson is a multinational pharmaceutical and medical technologies company, founded in 1886, and it has a global workforce of 130,000 employees. Kering is a French global luxury goods company, and it has some 38,000 employees. PepsiCo is US multinational food and beverage company, founded in 1989, and it oversees the manufacturing, distribution and marketing of its products. Unilever, is a UK multinational fast-moving consumer goods company, founded in 1929, and it employs some 148,000 employees. Walmart is a US multinational retail corporation, it has 2.3 million employees, and trades from over 10,000 stores worldwide.

Findings

The information on the protection and restoration of nature and biodiversity posted by the eight companies varied in scope and content, but rather than looking to describe each company's approach in detail, the author looked to identify, and draw out, a number of general themes to provide a narrative account. More specifically, five interlinked themes were identified, namely an ambitious approach, a business led rationale, a commitment to the regeneration of forests, collaborative endeavours, and a focus on the supply chain, which collectively captured the selected companies' activities to protect and nature and biodiversity.

The selected companies' ambitious approaches to the protection of biodiversity and nature were articulated in a number of ways. Unilever (2023), for example, emphasised *'we have set out a range of ambitious targets to protect nature'*, and *'by increasing the scale of the action we're taking within our own business and in partnership with others, we can help to regenerate nature and build systems that protect biodiversity.'* Walmart (2023) claimed *'we aspire to become a regenerative company, one dedicated to placing nature and humanity at the center of our business practices. In support of this ambition, Walmart and the Walmart Foundation, have set a goal to help protect, more sustainably manage, or restore, at least 50 million acres of land and 1 million square miles of ocean by 2030.'*

Kering (2023a) reported launching a *'Biodiversity Strategy'* in 2020, and in so doing claimed to be *'creating a real paradigm shift.'* This strategy, is

underwritten by a commitment *‘to have a net positive impact on biodiversity by 2025, by regenerating and protecting an area about six times our total land footprint’* (Kering 2023b), and embraced three goals, namely stemming biodiversity loss, restoring ecosystems and species, and triggering systemic change, and included four stages, namely *‘Avoid’*; *‘Reduce’*; *‘Restore and Regenerate’*; and *‘Transform.’* In the first stage the focus is on making decisions that do not have, or prevent, a negative impact on areas of high conservation, while in the third stage the aim is to restore ecosystems in areas where impact is unavoidable.

Many of the selected companies offered a business led rationale for protecting nature and biodiversity. Google (2023), for example, argued that *‘investing in nature is an investment in our workers, our products, and our communities. We want nature and people to flourish together in the communities that Google calls home, as well as the ecosystems where we source food for the hundreds of cafes we operate.’* Johnson and Johnson (2023) recognised *‘the importance of conserving biodiversity’* and *‘believes it is an important shared responsibility’*, that *‘nature has long played an integral role in the discovery of new medicines and ingredients’*, and that *‘biological resources provide opportunities to develop lifesaving healthcare solutions and naturally derived product ingredients.’*

In his *‘Foreword’* to Kering’s (2023b) *‘Biodiversity Strategy’*, Francoise-Henri Pinault, the company’s Chief Executive Officer, claimed our *‘products begin their lives in farms, fields, forests and other ecosystems around the world’*, and that *‘the careful stewardship of these landscapes is fundamental to our continued success, and also linked to our responsibility on a broader global scale.’* In a similar vein, Marie-Claire Deveu, the company’s Chief Sustainability Officer, argued *‘biodiversity is intrinsically linked to our business, and the need for holistic integration with nature through a strategically-driven approach is critical for our entire industry, and beyond’* (Kering 2023b).

A commitment to forestry regeneration is a feature of many of the selected companies’ approaches to nature and biodiversity protection. IKEA (2023), for example, emphasised that the company had been working *‘with responsible forest management practices, where biodiversity considerations have been an integral part’* for over 20 years, and that *‘all wood used in IKEA products is sourced from responsibly managed forests which do not contribute to deforestation’*, and, looking to the future, the company claimed that its *‘2030 Forest Positive Agenda’* enshrined its commitment to *‘further ramping up the work to enhance biodiversity globally’* (Ikea 2023). In a similar vein, PepsiCo (2023) *‘is committed to doing business the right way and strives to realize deforestation-free sourcing in our company owned and-operated activities’* by 2025.

Danone (2022) claimed to recognise *‘the urgent need to continue and amplify our effort in protecting and restoring forests’*, that this was *‘not only a moral imperative but a business imperative as well’*, because *‘as a global food business, we depend on healthy ecosystems and thriving communities where we source our raw materials’*, that *‘combatting deforestation and conversion will strengthen our supply resilience and help pave the way for sustainable growth’*, and that *‘our vision is to shift toward a forest-positive future, through protecting our remaining*

forests and regenerating what has been lost.' The focus of this forest-positive vision is to be on *'forging new alliances to protect and restore land and support livelihoods of smallholders and local communities'* (Danone 2022).

A variety of collaboration partnership were also seen as important in tackling the problems of biodiversity and nature loss. Danone (2022), for example, emphasised *'that collaboration sits at the heart of how we operate', that 'our commitments extend beyond our own operations to cover our suppliers and manufacturers, so we will work closely to drive action and report progress along the value chain', and that 'our forest positive vision means forging new alliances to protect and restore land and support livelihoods of smallholders and local communities.'* The company illustrated its collaborative commitments linked to soy production in Europe and South America, where it claimed to be preventing indirect land use change by supporting the expansion of production only on existing agricultural land, and by supporting financial incentives for landowners to protect native vegetation and forests. More generally, Danone reported contributing to a number of initiatives designed to protect and expand native forests.

Google claimed to be building tools and technologies that enabled a range of partners, including governments, non-governmental organisations and academics to help address nature and biodiversity loss. More specifically, Google reported on teaming up with Australia's Commonwealth Scientific and Industrial Organisation to protect coral reefs, and on the development of a machine learning solution to analyse underwater images of some species of starfish which feed on living coral. Further illustrations of Google's partnership activities focused on the collaboration with the Crowther Lab in Zurich designed to develop transparency, as well as connectivity to the biodiversity movement, and with Wildlife Insights to streamline biodiversity monitoring with the help of artificial intelligence, and to make it easier to collect and analyse data from remote cameras.

The selected companies looked to include their supply chains within their approach to the protection of nature and biodiversity. Unilever (2023), for example, emphasised that the company was committed to a *'deforestation-free supply chain by 2023'*, which meant that all the company's palm oil, paper and board, tea, soya and coffee would come from *'places verified as deforestation and conversion free, by which we mean that natural ecosystems haven't been converted to farmland'*, that *'we believe that, to make our greatest impact, we must focus first on generating change'*, and *'that's why we are concentrating on the first critical mile – from where our commodities are sourced, to where they are first processed.'*

PepsiCo (2023), emphasised its commitment to *'doing business the right way'*, to striving *'to realize deforestation free sourcing by 2030'*, and its recognition that the company had the opportunity to ensure that *'we and our suppliers operate in accordance with applicable legal requirements, and practice responsible forest and natural ecosystem stewardship.'* More specifically, PepsiCo (2023) emphasised that the company will source from suppliers that strive to *'use sustainable forest and natural ecosystem management practices in lands they own, lease, or manage to provide fiber, timber, and other ingredients'*, that it will *'implement sustainable and regenerative agriculture practices, support resilient livelihoods and communities,*

and support landscape approaches that enable sustainable agriculture production and thriving natural ecosystems to co-exist’, and that it will ‘preserve biodiversity and cultural values and optimize the social, environmental, and economic benefits of managed forests and other natural ecosystems.’

Ikea claimed to encourage its suppliers to include biodiversity in its plans, and in 2021 the company included biodiversity considerations in its updated supplier code of conduct, which looks to restrict business activities in areas of high conservation value. Google (2023, webpage) emphasised *‘we are focused on sourcing responsibly across our supply chain by procuring sustainable building and hardware materials and supporting biodiverse food systems’*, that *‘we procure building materials for development projects and hardware materials for products, while aiming to minimize negative impacts on global biodiversity’*, that *‘we work to ensure our food operations contribute positively to global biodiversity, and that ‘we leverage procurement practices and menu design to replace monocrop commodities with climate-resilient crops, and jumpstart local markets to support agrobiodiversity.’*

Reflections

The findings revealed that the selected companies publicly claimed to be pursuing a variety of approaches designed to protect and restore nature and biodiversity, but five general issues, namely, greenwashing, measurement, the concept of nature positive, unsustainable consumption, and a change in the dominant capitalism system, merit more general reflection and discussion. In discussing these issues, the focus is on general challenges faced by business companies, rather than on specific challenges associated with the selected companies featured in the current research. This seems the appropriate approach in a general discussion of the issues facing business companies that publicly claim to be protecting nature and biodiversity.

While business companies often claim to be committed to protecting nature and biodiversity, the reality can be different. Greenwashing, the process of providing misleading or false information, about the environmental impact of a company’s products or activities, must be seen as a potential problem. Here, there are three issues. Firstly, few, if any, of the selected companies’ claims are part of a rigorous analysis of their impact on nature and biodiversity, and are not subject to verification as part of an independent external assurance process. Secondly, while some of the companies draw attention to selected initiatives designed to protect and restore nature and biodiversity, there is no evidence that such an approach characterises all their business activities. Thirdly, many of the selected companies rely heavily on their supply chains, and while they might emphasise the importance of suppliers setting nature protection and restoration policies in train, they have limited power to enforce such policies, without damaging their, often cheap, sources of supply.

Measurement is a key issue, not least in that the complexity of nature means that the development of an agreed set of metrics, and a methodology, to measure

changes in nature and biodiversity, are difficult tasks. That said, some companies, do specialise in providing biodiversity assessment and measurement services to companies. NatureMetrics (2023), for example, claim to offer businesses the ability to *'measure and report on nature with scalable biodiversity monitoring'*, and *'to set meaningful goals aligned to science-based targets, build a roadmap for implementation, and mainstream nature in their organization.'* NatureMetrics claims to have worked with over 500 companies, including Tesco, Anglo American, MSC Cruises, Jacobs, and Nestlé, in over 100 countries. However, in reviewing some of the tools that help businesses to measure their performance on biodiversity issues, Katic et al. (2023) revealed that understanding the strengths and limitations of each of these tools, and of how they might respond to a business's needs, was not straightforward for companies, and that while *'these tools contained significant requirements related to biodiversity conservation, their implementation, being driven by market forces, is, at best, only partially aligned with global targets for biodiversity protection.'* This led Katic et al. (2023) to conclude *'there is a growing need to develop a common view among key stakeholders on the measurement, monitoring, and disclosure of corporate biodiversity impact and dependencies, to help integrate more credible and comprehensive indicators of corporate contribution to global biodiversity goals into corporate reporting and global policy frameworks.'*

For some conservationists, the ultimate goal of initiatives designed to turn the tide of nature and biodiversity loss is seen to be crystallised around the concept of nature positive. The World Wildlife Fund (2023) defined nature positive *'as halting nature loss, measured from 2020 levels, by increasing the health, abundance, diversity, and resilience of species, populations, and ecosystems, so that by 2030 nature is visibly and measurably on the path of recovery.'* However, while the concept of nature positive might seem to be an attractive goal, there are concerns that it may be captured by businesses for their own ends, or that it may pose unacceptable challenges for businesses. On the one hand, Silva (2022), writing under the Greenpeace banner, argued that *'the nature positive agenda promotes the financialisation of nature'*, that *'nature positive is more focused on saving a failed economic model than on protecting biodiversity'*, and that nature positive could enable corporate decision makers, and potentially governments, to *'distract, defer and obscure their harm for nature.'* On the other hand, while many companies might express their support for, and commitment to, a number of nature positive initiatives, it may pose unacceptable challenges for businesses.

Initiatives designed to reduce the loss of nature and biodiversity, to introduce restorative programmes, and to move towards a nature positive business future, are seen to be important in contributing to sustainable development, and ultimately to a transition to a more sustainable future. However, current levels of consumption, principally in western societies, which are largely responsible, for example, for increases in the land given over to food production, and for new tourism developments, are one of the principal drivers of the continuing loss of biodiversity and nature, and are ultimately unsustainable in a world of finite natural resources. That said, changing consumption behaviour, and curbing consumption, poses major challenges, not least in that many consumers are

unlikely to reduce their consumption levels voluntarily, in part because consumption has become an important element of many people's identity, and in part such a change could be seen as a retrograde step in societies, where what are seen as continuing improvements in lifestyles, have become the norm.

Taking an alternative and more radical perspective, there are arguments, rooted in Marxist political economy, that under capitalism, nature and biodiversity are commodities, feeding continuing economic growth, and that it is the workings of the capitalist system, that is the underlying cause of the global nature crisis. As such, the only genuine solution to problems attendant upon the loss of nature and biodiversity must be grounded in a radical change in the dominant global economic system, and in confronting capitalism. In theory, the development of a new alternative global economic model, centred on abandoning economic growth and prioritising the welfare of the planet, offers a way forward, but such a model currently seems unlikely, at best, to find more than token support in political and business communities.

Conclusions

This paper looks to explore why, and how, eight large companies have publicly claimed to be protecting nature and biodiversity. By way of a summary, the findings revealed that five interlinked themes, namely an ambitious approach, a business led rationale, a commitment to the regeneration of forests, collaborative endeavours, and a focus on the supply chain, effectively captured the selected companies' activities to protect nature and biodiversity. While a number of the issues identified in the literature review were reflected in the selected companies' approaches to the protection of nature and biodiversity, the companies did not report on how either the circular economy was facilitating this process or on metrics and measurement. At the same time, the author argued that measurement, greenwashing, the concept of nature positive, unsustainable consumption, and a change in the dominant capitalism system, were all important wider issues in exploring the role of business companies in protecting and restoring nature and biodiversity.

The paper has a number of limitations, not least that it draws its empirical information from the corporate websites of a limited number of companies, and in that it involves the author's selection of material from these websites. That said, the author believes it makes a modest contribution to helping to fill the gap in business and management literature identified earlier, on how companies are addressing the protection of nature and biodiversity, and that it may provide a platform for future research agendas. Such research agendas might, for example, include more detailed empirical investigations, into why, and how, companies develop programmes designed to protect and restore nature and biodiversity; how they look to measure reductions and improvements in nature and biodiversity associated with their activities; and the extent to which a company's approach to nature and biodiversity protection influences customers' patronage and buying behaviour.

References

- Broderick M (2023) *15 Businesses Leading the Way for Biodiversity and Target 15 Implementation*. Retrieved from: <https://www.ramboll.com/en-gb/insights/biodiversity-and-ecosystems/15-businesses-leading-the-way-for-biodiversity-and-target-15-implementation> [Accessed 20 December 2023]
- Carson R (1962) *Silent Spring*. Boston: Houghton Mifflin
- Fegger C, Mermet L (2022) New Business Models for Biodiversity and Ecosystem Management Services: Action Research with a Large Environmental Sector Company, *Organization and Environment* 35(2): 252-281
- Hahn T, Tampe M (2020) Strategies for regenerative businesses. *Strategic Organization*, 19(3): 456-477
- Katic PG, Cerretelli S, Haggard J, Santika T, Walsh C (2023) Mainstreaming biodiversity in business decisions: Taking stock of tools and gaps, *Biological Conservation*, 277, Retrieved from: <https://www.sciencedirect.com/science/article/pii/S0006320722003846> [Accessed 28 December 2023]
- Kennedy S, Fuchs V, van Ingen W, Schoenmaker D (2022) A resilience approach to corporate biodiversity measurement, *Business Strategy and the Environment* 32(5): 2567-2582
- Krause MS, Doste N, Matzdorf B (2020) What makes business commit to nature conservation. *Business Strategy and the Environment* 30(2): 741-755
- McKinsey and Company (2023) *Companies are broadening their commitments to nature beyond carbon*. Retrieved from: <https://www.mckinsey.com/industries/agriculture/how-we-help-clients/natural-capital-and-nature/our-insights/companies-are-broadening-their-commitments-to-nature-beyond-carbon> [Accessed 20 December 2023]
- NatureMetrics (2023) *Actionable nature intelligence for the future*. Retrieved from: https://www.naturemetrics.com/?gclid=Cj0KCQiAv8SsBhC7ARIsALIkVT3Z1VoilOLQ-qDLrldfuvYXQhoLUHrukqMkVgaYdxmBUwWh5WgQP6saApTiEALw_wcB [Accessed 28 December 2023]
- Panwar R, Ober H, Pinske J (2022) The uncomfortable relationship between business and biodiversity: Advancing research on business strategies for biodiversity protection, *Business Strategy and the Environment* 32(5): 2554-2566
- Prue FE, Addison PJS, Bull JW, Carbone G, Burgman M, Burgass MJ, Gerber LR, Howard P, McCormick N, McRae L, Reuter K E, Starkey M, Milner-Gulland EJ (2020) Bringing sustainability to life: A framework to guide biodiversity indicator development for business performance management. *Business Strategy and the Environment* 29(8): 3303-3313
- Roberts L, Georgiou N, Hassan AM (2022) Investigation biodiversity and circular economy disclosures: Insights from global firms. *Business Strategy and Environmental Management* 30(3): 1053-1069
- Silva MM (2022) *What is wrong with Nature Positive?* Retrieved from: <https://www.greenpeace.org/international/story/57395/what-wrong-nature-positive/> [Accessed 28 December 2023]
- S&P Global (2022) *The Sustainability Yearbook*. Retrieved from: <https://www.spglobal.com/esg/csa/yearbook/articles/nature-is-climbing-the-agenda-but-corporate-biodiversity-commitments-remain-rare> [Accessed 20 December 2023]
- United Nations Environment Programme (2023) *Five drivers of the nature crisis*. Retrieved from: <https://www.unep.org/news-and-stories/story/five-drivers-nature-crisis> [Accessed 20 December 2023]

- Wagner M (2022) Business, Biodiversity and Ecosystem Services: Evidence from large-scale survey data. *Business Strategy and the Environment* 32(5): 2583-2599
- World Wildlife Fund (2023) *A Global Goal for Nature: Nature Positive by 2030*. Retrieved from: <https://www.naturepositive.org/> [Accessed 24 November 2023]

Corporate Websites

- Danone (2022) *Renewed Forest Policy*. Retrieved from: <https://www.danone.com/content/dam/corp/global/danonecom/about-us-impact/policies-and-commitments/en/2022/danone-renew-forest-policy-dec-2022>. [Accessed 22 December 2023]
- Google (2023) *Nature and biodiversity*. Retrieved from: <https://sustainability.google/operating-sustainably/nature-biodiversity/> [Accessed 22 December 2023]
- Johnson and Johnson (2023) *Position on Respecting Biodiversity*. Retrieved from: <https://www.jnj.com/about-jnj/policies-and-positions/our-position-on-respecting-biodiversity> [Accessed 22 December 2023]
- Ikea (2023) *Our view on biodiversity*. Retrieved from: <https://www.ikea.com/global/en/our-business/our-view-on/biodiversity/#:~:text=All%20wood%20used%20in%20IKEA,going%20beyond%20our%20own%20business>. [Accessed 22 December 2023]
- Kering (2023a) *Sustainability: Biodiversity strategy*. Retrieved from: <https://www.kering.com/en/sustainability/safeguarding-the-planet/biodiversity-strategy/> [Accessed 22 December 2023]
- Kering (2023b) *Biodiversity Strategy: Bending the curve on biodiversity loss*. Retrieved from: https://www.kering.com/api/download-file/?path=Kering_Sustainability_Strategie_Biodiversite_2023_a57da2f106.pdf [Accessed 22 December 2023]
- PepsiCo (2023) *PepsiCo Stewardship of Forests and Natural Ecosystem Policy*. Retrieved from: <https://www.pepsico.com/docs/default-source/sustainability-and-esg-topics/pepsico-forestry-stewardship-policy.pdf> [Accessed 22 December 2023]
- Unilever (2023) *Protecting biodiversity and regenerating nature*. Retrieved from: <https://www.unilever.com/planet-and-society/protect-and-regenerate-nature/protecting-biodiversity-and-regenerating-nature/#:~:text=Together%2C%20our%20Beauty%20%26%20Wellbeing%20and,beauty%20and%20personal%20care%20products> [Accessed 22 December 2023]
- Walmart (2023) *Regeneration of Natural Resources: Forests, Land, Oceans*. Retrieved from: <https://corporate.walmart.com/purpose/esgreport/environmental/regeneration-of-natural-resources-forests-land-oceans#:~:text=> [Accessed 22 December 2023]

