Proceedings of the BMU International Innovation Conference 2016

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Edited by

Davinder Singh and Nandita Choudhury

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FOREWORD

It is with pride and a deep sense of privilege that I write the Foreword of the *Proceedings of the BMU International Innovation Conference 2016*. The conference was organised by the School of Management at BML Munjal University, in association with Imperial College Business School, London, Robert H. Smith School of Business at University of Maryland, and Lee Kong Chian School of Business at Singapore Management University.

Globalisation has thrown new challenges for humanity to tackle and find sustainable solutions to. Global warming, wars and terrorism, disease and pandemics, economic dislocation—almost every sphere of life is touched, making us ponder over ways to meet these challenges. This is where innovation comes in. Innovation is the bedrock of sustained economic growth and subsequent prosperity. It is at the core of globalisation, not only in terms of technological breakthroughs, but also in advances made in technological disseminations or in incorporation of organisational changes. Fast-paced change is the order of the day, which has its roots in innovation.

In its study, "Measuring Innovation: A New Perspective", the OECD Innovation Strategy takes a broad, horizontal approach and recognises that, in order to understand the nature of innovation and its impact and to help monitor the functioning of innovation systems, it is necessary to move beyond aggregate numbers or indices. These do not adequately reflect the diversity and linkages of innovation actors and processes. It is also necessary to go beyond science, technology and innovation indicators to draw on measures of education, of entrepreneurship, of economic, environmental and social outcomes, and of the broader conditions for innovation, including framework conditions.

It is precisely to look at the aggregators and address these concerns that BMU has organised the 1st BMU International Innovation Conference, where it strives to bring representatives from academia, industry and policy-makers on to a common platform, to discuss, corroborate and collaborate, to find novel ways of meeting the challenges, and to strive to make innovation the central nucleus around which we function as economies in the global society.

FOREWORD

The businesses have used innovation to gain a competitive advantage and this has led to economic growth and wellbeing of the society at large. Innovation has been the bed rock of human growth, right from the invention of wheel to current set of technologies like AI, Big Data Analytics, Cloud Computing, Quantum Computing and Blockchain. The ability to solve critical problems has always depended on innovations.

The world today is facing challenges which are unprecedented – global warming, continuing in-equality, increasing population, shrinking resources, lack of adequate medical attention to world's poor, safety of under privileged, water scarcity and many more. The UN Sustainable Development Goals (UNSDG) aim to bring the attention and emphasis to these. The goal number 9, 'Industry, Innovation and Infrastructure' lays specific impetus on innovation. Nevertheless, the achievement of other goals also depend heavily on innovation.

The countries, governments, businesses, civil servants and consumers have high hopes from the new technologies to provide better solutions. These technologies are getting increasingly ubiquitous and deeply embedded in everybody's day to day life. These together with design thinking, assumption testing, question framing, systems thinking, leverage points and complexity will set the tone for innovation in business and civil society.

Having said so, all the outcomes of innovation may not be desirable. The benefits to a group can be at the cost of another group. This needs to be addressed and reduced through involvement of all stakeholders in the discussion on innovation. Perhaps, a multi-stakeholder approach may be essential to avoid polarized societies, and uneven innovation and economic growth.

The BMU International Innovation Conference 2016 aimed at bringing together various stakeholders – policy makers, industry, civil society on a common platform to discuss how innovation can be used to address the challenges at the level of industry and beyond.

I am sure that the content based on the deliberations and panel discussions presented in the form of chapters in this edited volume, will become a good reference to the community and industry professionals.

PREFACE

The concept of innovation is very broad, encompassing a numerous and diverse set of activities. It has been recognised as one of the top priorities for economic and social growth. It is high on the agenda of all stakeholders—industry, government, academia, civil society, etc. At the same time, the environment in which innovation is undertaken is going through changes, which are leading to changes not only in how to innovate, but even in the foundational definition of innovation.

Globalisation of businesses, the growing role of digital media and the internet and an increased emphasis on knowledge are supply-side factors affecting innovation. The demand-side factors include economic slowdown, societal challenges like demographic inequalities and environmental consciousness among others.

Interconnectedness among countries has grown because of globalisation and the emergence of value chains which span across geographical boundaries. There is an increased flow of goods, services, people, finance and technology. The diffusion of innovation has become faster and greater than ever.

Internet penetration and usage among populations has been increasing because of higher internet speed, reduction in unit prices and access to smartphones. These have not only helped established businesses in their growth, but have also reduced barriers for small- and medium-sized enterprises (SMEs) to set up and grow new businesses. Internet-based businesses are forcing changes in business models of many industries.

Increases in populations, urbanisation and the resultant increases in economic activities, will put greater demand on limited resources, thereby increasing the global resource challenge. To address the growing environmental concerns, sustainability of businesses will need to be more closely coupled with sustainability of environment and natural resources. Innovation leading to more sustainable products and processes will be required and demanded.

Successful innovation requires more than just a creative idea. While much progress has been made in the recent past, industry and policy-makers still face challenges in the pursuit of innovation. For opportunities to be exploited, it is essential to execute the ideas with conviction, courage and perseverance. The need for research-based inputs in the field of innovation remains high.

xii Preface

Against this backdrop, BML Munjal University (BMU) organised the 1st BMU International Innovation Conference in 2016. Held on the 9th and 10th of January, 2016, in Delhi-NCR, India, the conference brought together innovation experts and scholars from across the world. The two-day agenda included multiple sessions with the participation of academia, industry and policy-makers.

This book is an attempt to summarise the proceedings of the conference. It consists of the summaries of the sessions held at the conference, and the abstracts and papers that were presented at the conference.

We are hopeful that this book will be helpful in sharing these ideas, various research and practice learnings with a larger set of academics, practicing managers and policy-makers.

Prof. Davinder Singh

Associate Professor – Strategy & Innovation
Assistant Dean- External Relations
School of Management, BML Munjal University

ACKNOWLEDGEMENTS

This edited book is an endeavour to compile the research papers presented at the 1st BMU International Innovation Conference, 2016. The conference was organised by the School of Management at BML Munjal University, in association with Imperial College Business School, London, Robert H. Smith School of Business at University of Maryland and Lee Kong Chian School of Business at Singapore Management University. We appreciate and would like to acknowledge the valuable support provided by many people.

Foremost, we are grateful to Mr Sunil Kant Munjal, Chancellor, BML Munjal University for his encouragement and support in organising the conference. We are also grateful to Mr Akshay Kant Munjal, President, BML Munjal University for having confidence in the team at the School of Management and supporting the execution of an international level conference at such an early stage of the school.

We also extend our sincere gratitude to Dr Anand Anandalingam, Dean, Imperial College Business School, and his colleagues, Dr Sankalp Chaturvedi, Dr Mark Kennedy, Dr Kalyan Talluri, Dr Tommaso Valletti and Prof. Eric Yeatman, for their active involvement in planning and execution of the conference.

We are thankful to Dr Gerry George, Dean, Lee Kong Chian School of Business, Singapore Management University, and Dr Rajshree Agarwal from Robert H. Smith School of Business, University of Maryland for their support towards the success the success of the conference.

We would like to express our gratitude to the authors and researchers from across the globe for their response to our call for papers. Many submitted abstracts and papers for presentation at the conference and gave permission to publish them in this book. We also express our sincere apologies to those authors whose papers were not selected for this compilation.

We would like to thank our faculty colleagues, officers and staff members of BML Munjal University for extending their support to the execution of the conference. They were supported by numerous student volunteers. We thank all of them for their enthusiastic involvement in the various activities related to the conference. We hope that this book will be useful to our fellow academicians in management education and that they will find it valuable during their future research.

Prof. Davinder Singh Dr Nandita Choudhury

SECTION I

SUMMARY OF SESSIONS— DAY ONE (9 JANUARY 2016)

BMU International Innovation Conference (9–10 January 2016)



KEYNOTE ADDRESS: "LIFEBOAT LOGIC"

MARK KENNEDY

IMPERIAL COLLEGE BUSINESS SCHOOL, LONDON

Mark Kennedy's keynote speech centred around research on what he called "Lifeboat Logic". He talked about how we spot and survive disruptions. A lot of new ideas and business models are emerging nowadays and it is becoming increasingly difficult to keep track of them. The challenge is even greater because, even though the companies do see the forthcoming disruptions, they are not able to deal with them (Innovator's Dilemma).

Prof. Kennedy explained that when new markets, ideas, technologies or social groups come into existence, people need new words to talk about them. People make judgements about the new product or technology, and accept the innovation. People discuss the new ideas and make linkages to their needs.

He explained the 6 Cs, which are the stages that a new idea goes through. Companies can use this to identify the forthcoming disruption. These stages are:

- 1. Commotion: refers to buzz about the new idea, market or technology.
- 2. Coherence: when clear definitions emerge from the buzz.
- 3. Currencies: the resultant labels which start to dominate the discussion and the market.
- Competition: others who come in and drive the intensity and leads to consolidation.
- 5. Communities: groups which are differentiated are created.
- 6. Change/collapse of the existing business model is the result

SPECIAL ADDRESS: "NANO TECHNOLOGY—HIGH PROFILE SCIENCE OR MARKET-DRIVEN ENGINEERING?"

ERIC YEATMAN

IMPERIAL COLLEGE, LONDON

Worldwide, technology commercialisation is a priority for universities. Nanotechnology is a growing field of university innovation. There is an intent to create commercial applications using this technology.

Nanotechnology research attracts a lot of public attention and there has been some success, albeit limited, in it being used for commercial ventures. The reasons for this are:

- 1. There is lack of clarity about what exactly constitutes the market.
- 2. Too many applications are being pursued.
- The funds are being provided far before the scalability has been established.
- 4. The competing technologies are also becoming better and cheaper.

There also exists a conflict between the pursuit for high profile science and market-driven engineering. Universities need to modify their policies to reduce this conflict. They need to enable and encourage the transfer of technology for engineering purposes and thereby create commercial success. Policies should reduce the pressure to publish in high-impact journals and encourage licensing and commercial collaboration.

PAPER PRESENTATIONS: TRACK 1

BUSINESS MODEL INNOVATION I

Chairperson

Prof. Kalyan Talluri, Imperial College Business School

Presenters

Dr Ashutosh Dixit, Cleveland State University
Dr Deepak Pandit, Indian School of Entrepreneurship
Mr Akshat Bhargava, State Trading Corporation
Mr Rashik Gupta and Mr Kartik Ponnuru, BML Munjal University

Business Model Innovation: Historical Perspective Dr Ashutosh Divit

Dr Dixit spoke about how business models allow companies to deliver value to customers at a lower price. Taking technology to the marketplace is not easy, as many a times new technology fails to deliver. New business methods pose a major threat to existing business models. The former may come with much more efficiency and change the system.

Business model change or innovation is not a new phenomenon. Business and industry structures have always undergone change periodically. The principles underlying these changes include:

- 1. Increased value for consumers.
- 2. Higher efficiency in delivering value.

An Exploratory Study of the Indian Auto Component Sector

Dr Deepak Pandit

Disruptive innovation is a powerful means for broadening and developing new products and providing new functionalities, which in turn disrupts existing market linkages. According to the National Innovation Survey of the Department of Science & Technology, the automotive sector has been identified as the highest innovation intensive industry in comparison to other well-known ones.

The automotive sector is well-structured, and preserves a close relationship between the buyer and component manufacturer, which means that innovation should be encouraged and will reach the end consumer. The capability of the organisation is measured through process, routine, resource allocation, knowledge accumulation and learning.

An integrating factor variable found to have a positive relationship with disruptive innovation has been R&D expenditure. R&D articulates the relationship between disruptive innovation and the dynamic ability for integration and reconsideration. Environmental turbulence also articulates the positive relationship between learning and disruptive innovation.

Is Taking Lab to Talent a Viable Model to Sustain Business Model Innovation?

Akshat Bhargava

Mr Bhargava spoke about an open innovation ecosystem, where people collaborate not just as one or two individuals, but amongst all i.e., an ecocentric system of cross organisational innovation. The main challenge to this system, as researched by Accenture group, is the lack of ecosystem experiences as well as the lack of clear interfaces between the partners as this allows the collective intelligence of the actors to be leveraged. The business model is talked about as a reverse pyramid where the traditional approach is discarded and consumers are put into focus.

Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. The basis of competition is shifting from competing organisations to competing ecosystems and the importance of shared vision is at the core of the process, which allows the collective intelligence of the actors to be leveraged. In light of the new innovation paradigm of "open innovation", organisations like Intel, Bell labs. GE and others rely on a large number of external partners to leverage competencies, financial resources and capabilities. Therefore, it becomes imperative for such companies to accelerate and sustain collaboration amongst their lab staff, both internally and with the external environment while remaining aligned with the organisational vision. But it becomes difficult to achieve this at all times given the constraints of weak ties, dedicated resources, IP issues and low commitments. It mostly results in disengagement of start-up innovators, individual contributors, unproductive cross-disciplinary teams and mismatched expectations leading to falls in business value and loss of reputation. To overcome these challenges and negatives for a business, in this paper a new pathway has been illustrated with the help of a model for companies to team up with talent (start-up innovators) to optimise collaborative association and sustain the business model innovation. A new role charter with focus on design experience has been developed to have a precise work GO-LAP (Global Lab Adding up Value) where the lab has to actually move out from isolation in a physical or virtual mode and connect with the micro entrepreneur, academia or industries.

Online Reputation of E-commerce Websites and Customer Trust

Rashik Gupta and Kartik Ponnuru

Mr Gupta and Mr Ponnuru tried to understand how Generation Y is managing the booming e-commerce industry.

The factors supporting e-commerce include:

- 1. promotional activity,
- 2. ease of exploration,
- 3. consumer support and
- 4. supply chain management.

Generation Y is basically in the age group of 15–34 years, who do online shopping and are the ones who use social media a lot. They buy electronic devices and are digital entrepreneurs with cloud sources.

The basic problem was the impact of online shopping on reputation and trust building with the customer. Therefore, primary research was carried out in which Mr Gupta and Mr Ponnuru found 50 variables, out of which only 32 were selected, which were then grouped into 7 factors, namely:

- 1. convenience,
- 2. reputation,
- 3. ranking,
- 4. promotion,
- 5. status of delivery,
- 6. trust and
- 7. advocacy.

People need to improve their reviews on the services, as these are taken into consideration. E-mail marketing is necessary. Touch and feel variable should be added. People also said that they want the product delivery before the estimated time.

PAPER PRESENTATIONS: TRACK 2

BUSINESS MODEL INNOVATION II

Chairperson Prof. Davinder Singh, BML Munjal University

Presenters

Dr Shiv Tripathi, Management Development Institute (MDI), Gurgaon Dr Arunaditya Sahay, BIMTECH, Greater NOIDA Mr S.M. Arif, on behalf of Prof. M.R. Faridi, Sattam Bin Abdulaziz University, Kingdom of Saudi Arabia Dr Kumar Shalender, Amity University, NOIDA Dr Anita Lal, FORE, Delhi

Failure of Service Innovations: Reasons and Remedies Dr Shiv Tripathi

According to Dr Tripathi, the service industry has been facing a setback in terms of innovation. As the service industry is completely driven by clients, structures to deliver service in these industries are also driven by them. There is little or no innovation in the industry. The employees in these organisations are not given enough freedom to share their ideas and they need to rely on senior management for ideas. So, the objective of this study was to find the reasons why the service industry is lagging in this domain.

The study, which was conducted with executives and managers from big industries, led to the following findings:

- There has been a lack of a system of innovation; there are portals in organisations, but no systems to track the ideas.
- There are insufficient reward systems, which lead to demotivation towards idea generation.
- Employees think that innovation is restricted to senior management only.
- Importance is given to an idea on the basis of the experience or expertise of the one proposing the idea.
- Interpersonal relationship problems do not let innovations reach the proper decision-maker.
- There is a fear of failure amongst the employees.

Since there are many problems, these can be tackled in the following ways:

- Senior management should collaborate often with the lower level managers.
- There should be a proper channel to deliver the ideas.
- Proper and timely rewards need to be given.
- Most importantly, "Let the system derive the innovation, and not vice versa".

So, for service industries to gain prestige in terms of innovation, they need to motivate their employees more, so that new ideas can be suggested often and fearlessly.

Business Model Innovation (BMI): Innovation in an Ecosystem

Dr Arunaditya Sahay

Business Model Innovation (BMI) is all about technology and the customer. Every business is customer-oriented. Businesses may think about innovation from a narrow or single perspective. However, a holistic perspective, including the business model along with the product, process and service should be considered for innovation.

Product innovation is all about the breakthrough inventions which lead to change in the living methodology of those using them. We can see it in the recent development of solar cars from fuel-based cars. Dr Sahay mentioned Indigo's business model and it being a modified version of Southwest Airlines' model. Another example is Toyota, which has pioneered the art of cost reduction through process innovation. Airtel is an example of business model innovation. They have outsourced all the non-core business functions; non-core being those which do not contribute in building competitive advantage.

DNA of Innovation in an Organisation—An Outlook

S.M. Arif

Mr S.M. Arif represented a team of three authors and spoke about the DNA of innovation—an organisational outlook. According to Mr Arif, it is important to make an organisation effective in terms of adapting, so it is all about making an organisation innovative through its DNA. Companies like Kodak do not exist today because they were not able to adapt to changes coming in and chose to be in the traditional line of their industry. In contrast, Hero Group has diversified and entered different fields. Similarly, ITC has expanded beyond its traditional tobacco business.

It is about creating a gene of innovation in the company through collaboration and integration of the whole organisation. This involves the internal environment and all the suppliers and distributors from the external environment. To create this gene of innovation, every department has to be included and innovation should be done as a whole. Today, no organisation can do this without innovation, so it is important to involve each and every employee in the innovation process.

Sustainable Growth through a Flexible Model of Customer Relationship Management

Dr Kumar Shalender

Dr Kumar Shalender gave insight on sustainable growth through customer relationship management. According to Dr Kumar, customer relationships are the bread and butter of many organisations. The flexibility takes different forms, right from organisational flexibility to marketing flexibility. So he said, flexibility is multi-dimensional but when it comes to the customer, flexibility is hard to define.

He said, Ansoff was the first one who tried to define flexibility. He then talked about customer flexibility. The customer relationship management depends on three kinds of flexibilities:

- 1. customer flexibility,
- 2. service flexibility and
- 3. information flexibility.

Dr Kumar said that from literature he has understood that there is a close relationship between marketing and customer relationship management. Since the 4 Ps of marketing has people in it, marketing has a great impact on customer relationship management. Dr Kumar said that the service offered also affects customer relationship management. He also mentioned that there are three points where service flexibility has an impact on customer relationship flexibility:

- 1. customer interaction.
- 2. customer participation and
- implementation with regard to implementing what the customer wants.

Information flexibility also has an important role in customer relationship management. Dr Kumar said that the customer tends to behave the way information is provided. He also said that his research is only on the theory and he has yet to get empirical proof.

A Study of Women's Entrepreneurship in India

Dr Anita Lal

Dr Lal has done her research on women's entrepreneurship in India. Entrepreneurs play a vital role globally and among them, women are more unique when compared to men. They have a zeal to achieve something. They play an important role in leadership duties, and companies led by women are more successful, which implies a global growth. They are changing the face of business, as they have got a platform in India to become an entrepreneur, and this has been supported by Gen report 2010, Women's web 2012 and some other surveys. Dr Lal's research has covered various aspects of this such as nature, trade, problems, opportunities and challenges.

Objectives of Research

- To examine the reasons for the success of enterprises run by women.
- To evaluate to what extent they are innovative.

Findings

- Women entrepreneurs received a boost post liberalisation of the industrial policies through which the government started supporting entrepreneurs.
- Women are sufficiently confident because of their qualifications and experience.
- The majority of them are starting business with their own savings and some with the help of mentors and financial institutions.
- They are adding value in terms of quality, delivery and managing time.

Reasons for the success of Women Entrepreneur include

- Being high on achievement orientation
- Having capacity to manage risk
- Being Innovative while tackling challenges
- Gaining the support of the family

Suggestions

- Their support system should facilitate them scaling up their business.
- Feasible funding opportunities and norms should be provided.
- The ecosystem should encourage women to enter into the manufacturing sector.

PAPER PRESENTATIONS: TRACK 3

DIGITAL INNOVATION

Special Presentation

Digital Policies: The Case of Broadband Internet by **Prof. Tommaso Valletti**, Imperial College Business School

Chairperson
Dr Tapan Panda, BML Munjal University

Presenters

Dr Nishta Rana, MIER College of Education, Jammu **Mr Mir Shahid**, on behalf of **Prof. A. Sharma**, R.D. University, Jabalpur