INNOVATION ORIENTED BEHAVIOUR OF MANAGERS IN MACEDONIAN ORGANIZATIONS

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Abstract
Purpose: The purpose of this paper is to explore innovation oriented behavior of managers in Macedonian organizations.
Design/methodology/approach: Research instrument in a form of a questionnaire was used to obtain data about innovation oriented behavior of managers.
Findings: The results from the study will help managers to pursuit innovation within the organizations borders and enhance corporate entrepreneurship in order to gain competitive advantage.
Research limitations/implications: There is a literature gap in the area of studies exploring innovativeness and behavior of managers in Macedonia. More studies like this are needed to propose strong recommendation about managerial behavior. We recommend replicating the research to a bigger number of managers and comparing the analysis.
Practical implications: This study will increase the understanding of how managers can enhance innovations and better performance, as well as increase the motivation of organizations to invest in R&D activities and be more innovative.
Originality/value: This research contributes to the field by offering support and new findings. This study adds to the body of literature in what is considered relatively new and unexplored area of study. The survey conducted among Macedonian managers contributes a lot for the knowledge about innovation oriented behavior and corporate entrepreneurship.

Key words: *Business Investment in R&D, Corporate Entrepreneurship, Innovation, Macedonia, Management*

JEL Classification: *O30, O32, L2, L26*

I. INTRODUCTION

The world of today is all about change and speeding the paste for every organization. Organizations are faced with accelerated development of new technologies, highly innovative competitors, more demanding and complex customers, competitive advantage achieved through global outsourcing and international strategic alliances. These turbulences are pressuring the organizations to find new paths to sustainable competitive advantage. This also means new challenges for the management process, the traditional models of bureaucracy, and models of rewarding, control and leadership style, which can be overcome with entrepreneurial behavior inside the organizations.

The research and development (R&D) activities represent a crucial input to the innovation process. Investing in knowledge and innovation is considered as investing in growth and prosperity because they create new knowledge, new technologies, new products and services, and contribute to increased wealth. The role of managers is crucial in nurturing organization culture of innovators and valuing the intellectual capital of their organization. Managers oriented toward innovation are motivating their employees to act as corporate entrepreneurs and enhance the competitive advantage of the organization (Omri, 2015).

Business plays a very important role in providing innovative solutions by continuously investing in R&D activities and supporting entrepreneurial behavior within the organization. In this sense, the aim of this paper is

to explore innovation oriented behavior of managers in Macedonian organizations and provide recommendation for enhancing their innovativeness.

We structure the paper as follows: first we focus on the innovation concept, analyzing the importance of business expenditure in R&D, and provide comparison of innovation performance and R&D expenditure in European countries. In the next section we present the methodology used for the empirical analysis, the selected variables and results from the survey. Finally, discussion and conclusions about innovation oriented behavior of managers and corporate entrepreneurship are presented and implications are discussed.

II. INNOVATION AND INVESTMENTS IN R&D

Innovation is the leading force of competitiveness, of growth, of profitability and of the creation of durable values. Innovation refers to the commercial implementation of the best ideas, work methods and even business models for the company, thus becoming the most important component of the long-term economic growth engine. In this context, the companies' ability to innovate and, especially, to ensure the finalization of this process, influences directly the economic growth.

Innovation has number of attributes (Gamal, 2011):

- Innovation involves the combination of inputs in the creation of outputs
- Inputs to innovation can be tangible and intangible
- Knowledge is a key input to innovation
- The inputs to innovation are assets
- Innovation involves activity for the purpose of creating economic value
- The process of innovation is complex
- The outputs in innovation are unpredictable
- Knowledge is a key output in innovation

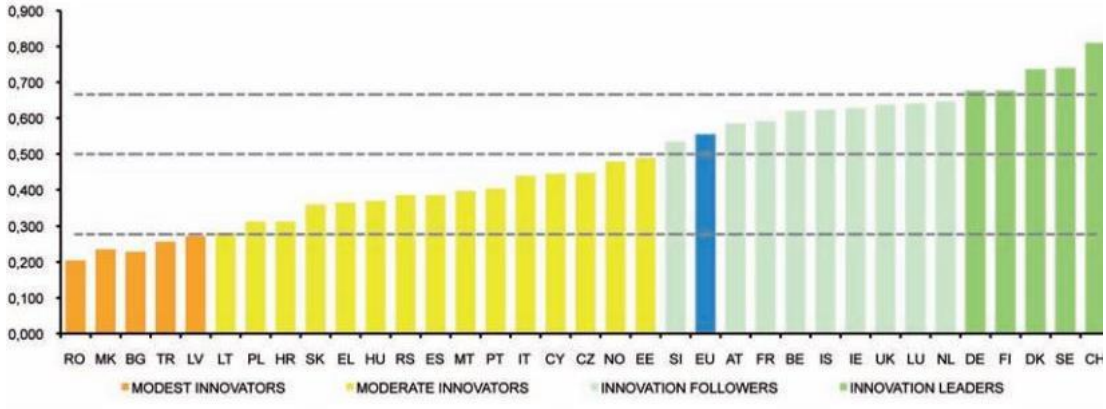
Specialized literature deals with innovation from several angles: innovation as a product, innovation as a process, as well as innovation management. Product innovation deals with new or significantly improved products, in which it is addressed to specific targeted markets. New techniques, methods or improved ones of the various departments/ structures (production, commercial) give birth to the process innovations. Through innovation management we understand creation of the kind of the organizational culture (as a sum of collective values, beliefs, traditions principles and practices, settled in time, accepted and adopted by members of organization) in which the innovative behavior is encouraged and rewarded. Innovation management refers to the creation of a kind of organizational culture (etc.) in which the innovative behavior is encouraged and rewarded (Tomescu, A. and Botezat, E., 2015).

Europe as a region varies greatly in terms of both competitiveness and innovation. The large differences between European countries are driven by factors such as the number and quality of linkages between firms and entrepreneurial ventures, and between the private and public sectors. Each year, starting from 2001, the European Commission is doing comparative assessment of the innovation performance, making a comprehensive benchmarking and monitoring system of research and innovation trends and activities in Europe and other emerging economies. According to Innovation Union Scoreboard countries of Europe by the values of its innovative performance are grouped into four groups:

- Innovation leaders
- Innovative followers
- Moderate innovators
- Modest innovators

The total index for innovative performance of countries in Europe is shown in Figure 1.

Figure 1 Innovation performance in Europe



Source: Innovation Union Scoreboard 2015

According to this report Macedonia is modest innovator and performing very similar to Romania, Bulgaria, Turkey and Latvia. In the report Macedonia is described as a country which is performing well above average in Non-R&D innovation expenditures and SMEs with product or process innovations, and its growth performance (3.7%) has been well above that of the EU (Innovation Union Scoreboard, 2015).

Speaking in terms of east and west, it can be observed that West Nordic countries have been marked by a high index of innovation and also, how the innovation level of East European regions are far below Western Europe and in the European media (Maticiuc, 2015).

Table 1 R&D expenditure by sector in Macedonia between 2003 and 2010

	2003	2004	2005	2006	2007	2008	2009	2010
GERD	0.22	0.24	0.24	0.20	0.17	0.23	0.20	0.22
BERD	0.003	0.02	0.03	0.02	0.04	0.07	0.04	0.02
GOVERD	0.14	0.12	0.11	0.10	0.08	0.09	0.09	0.1
HERD	0.08	0.11	0.10	0.08	0.05	0.07	0.07	0.1

Source: Report on Research & development activity

According to the data from Table 1, Macedonia spent 0.22% of its GDP on R&D in 2010 which is one of the lowest percentages in Europe. The biggest contributors to total R&D expenditures by funding sources are the governmental sector with 50.3%. The share of GERD by sector of performance as percentage of GDP for the year 2010 is 0.09 for the government sector, 0.07 for higher education and 0.02 for the business sector. As a comparison, in the EU, Expenditure on R&D in the business sector in 2013 amounted to 1,28%. From the previous analysis of research and development expenditures in the Macedonia and their comparison with the ones of the EU countries, it can undoubtedly be concluded that the Macedonian R&D expenditures primarily come from either the higher education or the governmental sector, with only pitiful amount comes from the business sector compared to the EU practice where the business sector participates with, on average, more than 50%.

The analysis of R&D indicators of Macedonia generates the following conclusions:

- The investments in R&D activities are very low and need to be increased;
- The major investor in R&D activities is the Government of the Republic of Macedonia,
- The business sector should develop into a major R&D financier.

The potential impact that investments in research and innovation have on productivity growth is even higher for developing countries, given the opportunity for catching up that is associated with larger investments in innovation. Results from a study using firm level data for the Western Balkans show that innovative firms grow 15 percent faster in sales and 8 percent faster in labor productivity than do non-innovative firms (Western Balkans Regional R&D Strategy for Innovation, 2013).

On Table 2 a comparison is shown between EU, Slovenia, Croatia, Serbia and Macedonia, regarding the firm activities indicators for 2015. Firm Activities are presented with two dimensions, Firm investments and Linkages and entrepreneurship.

Table 2 Innovative performance - Firm Activities indicators in 2015

	EU	SI	HR	RS	MK
Firm activities					
Firm investments					
Business R&D expenditure	1.9%	1.5%	6.1%	6.3%	0.0%
Non R&D innovation expenditure	1.9%	-11.5%	1.5%	19.7%	0.0%
Linkages and entrepreneurship					
SMEs innovating in-house	-0.8%	0.0%	-3.3%	-1.4%	0.0%
Innovative SMEs collaborating with others	2.5%	-0.5%	-3.6%	11.7%	0.0%
Public-private co-publications	2.3%	8.8%	9.5%	22.0%	n/a

Source: Innovation Union Scoreboard, 2015

From the analysis of the performance of innovation dimension Firm Investments for each indicator separately derived conclusion that Macedonian efforts to reach innovative performance of the developed countries of Europe need to allocate more funds for R&D that will enable the creation of new knowledge and its diffusion among enterprises. Very positive trend can be observed in Serbia and Croatia when it comes to business R&D expenditure. Serbia has high percentage on the non R&D innovation expenditure. Investments in equipment and machinery, costs of patents and licenses, measure the diffusion of new production technologies and ideas, represent the basis for technological development and improved competitiveness among enterprises. Evidence from Macedonia shows that in a recent firm survey, 60 percent of respondents cited the high cost of innovation as the most important obstacle for innovation.

The second dimension of innovation Linkages and entrepreneurship shows that Macedonia has a very poor record in the field of SMEs presented their own market innovation, where again Serbia has the highest percentages. Serbia has highest percentage in the field of SMEs with innovation common with other SMEs which shows a higher level of cooperation between SMEs and a better flow of knowledge between research institutions and SMEs and between themselves. It should be stressed the need for active cooperation between researchers from both public and private sector that will result in an increased number of co-publications that raise the quality of creation and diffusion of knowledge.

Results from the Community Innovation Survey (CIS) and from a GfK survey shows that about one third of firms introduced at least one type of innovation between 2008 and 2010, which is similar to the EU average. However, almost half of micro companies did not introduce any type of innovation; patenting activities were also limited. The GfK survey showed that 20 percent of companies consider themselves to be very or extremely innovative, while 23 percent stated that they do not innovate at all. In addition, 23 percent of firms report having introduced product or service innovation in the previous 3 years (the CIS survey reports 17 percent). Less than 40 percent of the companies reported some type of expenditures related to innovation activities, but those were mainly for the acquisition of machinery, equipment, and software. Macedonian companies very rarely use external R&D services – only 7 percent of the companies surveyed by GfK answered positively on this, while reported expenditures on purchasing external R&D, or acquisition of external knowledge, is minor (only about 20,000,000 Denars in total for all companies). Furthermore, half of the companies do not offer any form of training to their employees. More than half of the Macedonian enterprises perceive the following factors as the most important obstacles for innovation: high cost of innovation (60%), lack of funds within the company or within the group (57%), and lack of access to external financial resources (52%). Another important dimension of the absorptive capacity of the companies is their willingness to acquire new knowledge. As noted, about half of the GfK surveyed companies never offered their employees any type of training. The training that was offered included in-house training (50%), with focus on technical training (37 %) and management related training (17%) (OECD 2011).

III. THE ROLE OF MANAGERS IN ENHANCING CORPORATE ENTREPRENEURSHIP AND STIMULATING INNOVATIONS

The first association of the word entrepreneurship most likely, will be persistent, hard-working and energetic individual with an idea, creating new business. But the nature of entrepreneurship is universal. It can be applied when starting a new business, but also exploiting new opportunities in mid-sized, large conglomerates, non-profit organizations and public institutions.

Corporate entrepreneurship involves generation, development, and implementation of new ideas and behaviors by a company. According to this definition, corporate entrepreneurship centers on enhancing the

organization's ability to be innovative and creates new products, services or programs (McFadzean, 2005, Damanpour, 1991). Also, some definitions add that corporate entrepreneurship is about corporate venturing which leads to creating new business organizations within the corporation (Kuratko, 2009).

The companies that have success and register the quickest growth are those that use, in their daily activity, innovative solutions, and it is particularly for this reason that a signification percentage of their income is generated by new or quality improved products and services. They shall have to prove their capacity to adapt to the changes in the business environment so as to maintain the acquired and detained positions (Ionescu and Dumitru, 2015).

Very often, large organizations have inherent problem of being entrepreneurial for a lot of reasons. These barriers can be systematized in 6 categories: systems, structures, direction, procedures, people and culture. Some of the constraints are: oppressive control systems, overly rigid, formal planning systems, too many hierarchical levels, restricted communication channels, top-down management, no formal strategy for entrepreneurship, no vision from the top, no entrepreneurial role models at the top; long, complex, approval cycles; unrealistic performance criteria; fear of failure; short-term orientation; inappropriate skills and talents for managing entrepreneurial change; values that conflict with innovativeness, risk-taking, and proactivenessm (Morris, 1998).

Managers have very important role in enhancing corporate entrepreneurship and stimulating innovations. Their behavior is directly influencing the organizational culture and climate, and their decisions are correlated with the established processes (Hisrich and Kearney, 2013). Managers should support creativity and motivate employees to experiment in order to introduce new products, services, and new processes. In other words, managers should enhance corporate entrepreneurship which is necessary for organizations that want to explore opportunities that may result in organizational development. The willingness to be innovative has influence on the innovation process steps searching, selecting and implementing to come up with new products and/or services but also in the steps evaluating and learning because an organization must learn from its practices to provide an input for future innovation (Lumpkin and Dess, 2001).

IV. INNOVATION ORIENTED BEHAVIOR OF MACEDONIAN MANAGERS

The purpose of this paper is to explore innovation oriented behavior of managers in Macedonian organizations. The research was conducted to provide an understanding of the behavior of Macedonian managers and their pursuit to innovation.

The research question posed is do Macedonian managers have innovation oriented behavior? Are they oriented toward corporate entrepreneurship and stimulating innovations in their organizations?

The primary objective of this research is to assess manager's behavior toward innovation activities. The secondary objective of this research is to identify manager's perceptions and importance of innovation activities in their organizations.

The expected results from this study were:

1. Macedonian managers demonstrate moderate level of behavior oriented toward innovations.
2. Managers are aware of the importance of innovations for the organization.

Methods

Sample

The sample group consisted 48 managers from different organizations in Macedonia. The sample group consisted 13 males (27,1 percent) and 35 females (72,9 percent). According to their age respondents in this survey were divided in 5 groups:

- 20-30 years: 10 (20,8 %)
- 31-40 years: 26 (54,2%)
- 41-50 years: 9 (18,8%)
- 51-60 years: 2 (4,2%)
- More than 60 years: 1 (2,1%)

The respondents had different educational background:

- High school diploma: 1 (2,1%)
- Bachelor diploma: 20 (41,7%)
- Master of science: 20 (41,7%)
- Ph.D: 7 (14,6%)

They were all working on managerial positions, among which 19 (39,6%) were top managers, 19 (39,6%)

were middle level managers and 10 (20,8%) were first line managers. The respondents had between 1 and more than 30 years of working experience: 0-5 years – 27 (56,3%) managers, 6-10 years – 11 (22,9%) managers, 11-20 years – 5 (10,4%) mangers, 21-30 years – 4 (8,3%) managers, more than 30 years of working experience – 1 (2,1%) manager. The respondents are working in different organizational settings in different sectors: production, service, education, health, construction, retail.

Data collection

The survey was conducted by creating a questionnaire which was send through e-mail to managers in lot of organizations in Macedonia. They received an explaining of the study and were invited to participate. Data was collected during the summer of 2015.

Measurement of variables

In this survey respondents answered questions concerning their innovation oriented behavior: the significance of innovation for them personally, for the organization, and the environment that they are creating with their behavior concerning innovativeness.

Here are some questions that we asked our students to assess themselves:

1. How often you introduce innovation in your organization?
2. How important are for you organizational processes which learn and implement innovations?
3. How important are for you human processes which learn and implement innovations?
4. How would you rate yourself on managing creativity and innovations?
5. To what degree do you agree with the following: My organization is critically considering every new concept proposed by the employees?
6. To what degree do you agree with the following: Employees have enough space to develop every new concept important for the organizations?

Data analysis

For all the questions descriptive statistics were calculated.

On the first question: How often you introduce innovation in your organization?, the respondents who answered often were 68,8%, rare were 29,2% and never only 2,1%.

On the second questions the respondents rated how important is for them several aspect shown in Table 3.

Table 3 Perceived importance by Macedonian manager

How important is for you the following	very important	important	little important	not important
getting ideas to make innovations better or improved	77,1%	18,8%	2,1%	2,1%
implementing innovative ideas	79,2%	18,8%	2,1%	0
human processes which learn and implement innovations	66,7%	27,1%	4,2%	2,1%
organizational processes which learn and implement innovations	70,8%	20,8%	6,3%	2,1%

On the third question: How would you rate yourself on the following, respondents answered on several questions reported in Table 4.

Table 4 Manager's rating themselves on aspect related to innovativeness

How would you rate yourself on	excellent	good	average	weak
your expertise in relation to the knowledge gained in the organization	54,2%	43,8%	2,1%	0
your expertise in relation to the experience you gained in the organization	54,2%	45,8%	0	0
your level of motivation	47,9%	39,6%	6,3%	6,3%
your creative and thinking skills	56,3%	39,6%	2,1%	2,1%
your entrepreneurial skills	41,7%	47,9%	8,3%	2,1%
managing creativity and innovations	41,7%	43,8%	14,6%	0

On the next question: To what degree do you agree with the following?, the respondents answered on several questions and the results are shown on Table 5.

Table 5 Manager's way of behaving on aspects related to innovation

To what degree do you agree with the following	strongly not agree	not agree	agree	strongly agree
I feel encouraged to share every opportunity I find useful for the organization	10,4%	14,6%	33,3%	41,7%
Every change in me is exciting and rewarding	12,5%	12,5%	43,8%	31,3%
I like to see the problems from new aspects (perspectives)	10,4%	10,4%	39,6%	39,6%
There is a competition among the employees to identify new and better way of production, work methods or processes	8,3%	31,3%	43,8%	29,2%
Our organization is always searching for new ways to improve the products and processes	8,3%	18,8%	43,8%	29,2%
Innovation and creativity is considered important for my work position	12,5%	16,7%	33,3%	37,5%
My organization is critically considering every new concept proposed by the employees	10,4%	37,5%	31,3%	20,9%
We receive feedback from the organization on every innovative initiative proposed from the employees	10,4%	31,3%	35,4%	22,9%
Employees have enough space to develop every new concept important for the organizations	10,4%	25,0%	45,8%	18,8%
I prefer problems which don't have one precise solution	8,3%	60,4%	27,1%	4,2%
There is great support from the management for all necessary resources during implementing new ideas	12,5%	33,3%	37,5%	16,7%
For employees is easy to ask and get help and support during researching new initiatives	14,6%	43,8%	29,2%	12,5%
Our organization provides financial resources needed for developing new innovations	14,6%	37,5%	37,5%	10,5%
There are no obstacles for proposing new initiatives	14,6%	25,0%	43,8%	16,7%
Our organizations is open for testing every new ideas proposed from the employees	6,3%	41,7%	37,5%	14,6%
The mistakes that occur during implementing new ideas are accepted as experiential learnings	10,4%	22,9%	50,0%	16,7%
The control during implementing new initiatives is easily established	8,3%	39,6%	43,8%	8,3%
All new initiatives are documented to provide maximum lessons learned	16,7%	33,3%	31,3%	18,7%

According to the results from this study we may conclude that the respondents understand the importance of innovation. Most of them are introducing innovative approach in the organization regularly. Two thirds of the respondents reported that getting innovative ideas is crucial for the organization, as well as the importance of organizational and human processes which learn and implement innovations.

The results also show that the respondents rate themselves very highly concerning to various aspects related to innovativeness, like: level of motivation, creative and thinking skills, entrepreneurial skills, and capacity of managing creativity and innovations. From their answers we can conclude that to some extent they are satisfied with their capabilities, but that there is still space for improvement personally, which will effect on their way of management and orientation toward innovations. Managers who were on top and middle level in organizations expressed higher level of behavior toward innovation.

When the respondents were asked rate their behavior on several aspects related to innovation, we found that managers feel encouraged sharing every opportunity they find useful for the organization. Almost half of the respondents strongly agreed that take actions when new opportunity arise creating competitive advantage for the organization. They also demonstrated that they consider their job position related to acting innovatively and having open approach with new ways of addressing actual problems. But on the other hand, respondents' answers show that organizations in Macedonia have organizational difficulties in supporting innovation as system thinking and entrepreneurial behavior within organizations. More specifically, most of half of the respondents answered that they strongly disagree or don't agree with the following:

- There is a competition among the employees to identify new and better way of production, work methods or processes;
- My organization is critically considering every new concept proposed by the employees;
- We receive feedback from the organization on every innovative initiative proposed from the employees;
- Employees have enough space to develop every new concept important for the organizations;
- There is great support from the management for all necessary resources during implementing new ideas;

- For employees is easy to ask and get help and support during researching new initiatives;
- Our organization provides financial resources needed for developing new innovations;
- There are no obstacles for proposing new initiatives;
- Our organizations is open for testing every new ideas proposed from the employees;
- The control during implementing new initiatives is easily established; and
- All new initiatives are documented to provide maximum lessons learned.

Considering these results we can conclude that Macedonian organizations are lacking well established models of managing creativity and innovations, problems concerning procedures and processes supporting entrepreneurial behavior of employees, which is adequately rewarded and acknowledged. The results from this research show that Macedonian managers take moderate level of innovation oriented behavior in their organizations. All of the respondents strive for success and great achievements, but very often they take only good calculated risk and have organizational issues how to nurture corporate entrepreneurship.

V. CONCLUSIONS

Organizations nowadays are challenged to be creative and innovative in order to be competitive and survive. In this process of continuous adaptation, new changes in technology, communications, markets, consumers, politics and environment, managers have the most important role. Their role is crucial in nurturing organization culture and climate of innovators and valuing the intellectual capital of their organization. Managers oriented toward innovation are motivating their employees to act as corporate entrepreneurs and enhance the competitive advantage of the organization.

According to Innovation Union Scoreboard Macedonia is modest innovator, spending only 0.22% of its GDP on R&D, which is one of the lowest percentages in Europe. The analysis of R&D indicators of Macedonia generate the conclusion that the business sector should develop into a major R&D financier, because the potential impact that investments in research and innovation have on productivity growth is even higher for developing countries. Results from the Community Innovation Survey (CIS) and from a GfK survey shows that about one third of firms introduced at least one type of innovation between 2008 and 2010, which is similar to the EU average. In this survey it was reported that half of the companies do not offer any form of training to their employees. Also, more than half of the Macedonian enterprises perceive the following factors as the most important obstacles for innovation: high cost of innovation (60%), lack of funds within the company or within the group (57%), and lack of access to external financial resources (52%).

The primary objective of this research was to assess manager's behavior toward innovation activities. The results from the survey confirmed the expected results:

1. Macedonian managers demonstrated moderate level of behavior oriented toward innovations.
2. Managers are aware of the importance of innovations for the organization.

Results from the survey showed that Macedonian managers are aware of the importance of innovations, but also, are aware of organizational barriers to corporate entrepreneurship. Advice for them would be to analyze their organizational structures and control systems, modify them if necessary to enhance creative work and entrepreneurial thinking. Also, they should consider different management and leadership style which will develop organizational culture which enhance entrepreneurial learning, different control mechanisms, and openness to creative and innovative ideas, changing the mindset of the employees and their acceptance of changes, as well as orientation to improving the existing products, services and processes.

The findings of this research can serve Macedonian managers as reminder to pursuit innovation within the organizations borders and develop capacities to enhance corporate entrepreneurship in order to gain competitive advantage. Considering the results managers can understand that there is a need to create changes on personal level by developing new approaches toward innovations and methods for enhancing entrepreneurial behavior, as well as changes on organizational level, followed by bigger investments in R&D activities and building systems that can support innovations.

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